



STIP Project No. U-2719

# I-440 Improvement Project

*From south of Walnut Street in Cary to east of Wade Avenue in Raleigh*



# FINDING OF NO SIGNIFICANT IMPACT (FONSI)



*May 2018*

*Volume 1*

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## **I-440 Improvement Project**

From south of Walnut Street in Cary to east of Wade Avenue in Raleigh

Federal Aid Project No. IMSNHS-0440(10)

WBS No. 35869.1.2

**STIP Project No. U-2719**

### **Administrative Action**

## **FINDING OF NO SIGNIFICANT IMPACT**

**UNITED STATES DEPARTMENT OF TRANSPORTATION**

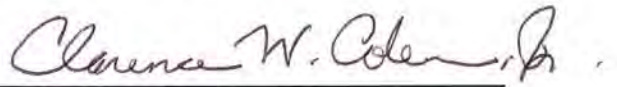
**FEDERAL HIGHWAY ADMINISTRATION**

**&**

**NC DEPARTMENT OF TRANSPORTATION**

Submitted Pursuant to the National Environmental  
Policy Act 42 USC 4332(2)(c) and 49 USC 303

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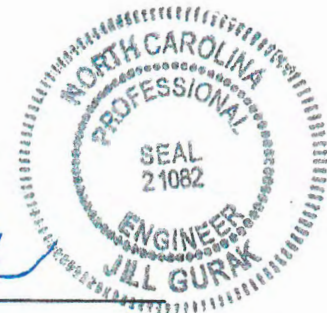
Submitted Pursuant to the National Environmental  
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*May 2018*

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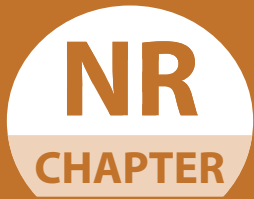
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# Note to the Reader

## What's in this document?

This document is a Federal Highway Administration (FHWA) Administrative Action, Finding of No Significant Impact (FONSI). This document is the second, and final, document prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended. The North Carolina Department of Transportation (NCDOT) and FHWA are joint lead agencies for the proposed project.

NCDOT and FHWA have determined that this project will not have any significant impact on the human or natural environment. This FONSI is based on the Environmental Assessment (EA) that was prepared for the project and signed by FHWA and NCDOT in June 2017.

The EA was independently evaluated by FHWA and determined to adequately and accurately disclose the environmental issues and impacts of the proposed project. The EA, together with the information contained in this FONSI, provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required.

## Contact information

This FONSI is available for review and download on the project website at [www.ncdot.gov/projects/i-440improvements](http://www.ncdot.gov/projects/i-440improvements).

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## **Project schedule**

The project will be constructed as a design-build project. The design-build team is anticipated to be selected by NCDOT in the summer of 2018. Final design, permit acquisition, right of way acquisition, and construction activities will be completed by the design-build team. Construction is expected to begin in late 2018, and the project is expected to be open to traffic in 2023.

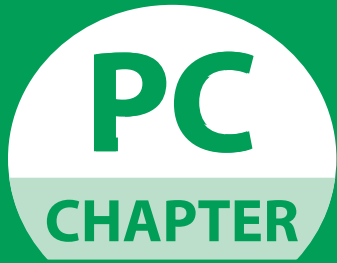
## **What happens next?**

This FONSI completes the process required under the NEPA. The FHWA can now authorize NCDOT to continue into the final design, right-of-way acquisition, and construction phases of the project.

NCDOT has advertised this project for construction as a design-build project. The advertisement included requesting bids for this project together with Project U-4437, which is the grade separation of Blue Ridge Road with Hillsborough Street and the railroad tracks near the NC State Fairgrounds. A separate environmental consultation to the Categorical Exclusion for Project U-4437 is being prepared by NCDOT. The two projects are independent but are close to each other, and were advertised together to ensure coordination of activities and maintenance of traffic during construction.

In the design-build process, construction contractors team up with design engineers to bid on the project. These teams review the preliminary design of the Selected Alternative and try to improve upon the design, lessen impacts, shorten construction times, and reduce costs. The teams' submissions are reviewed by NCDOT and the best value team is awarded the contract. The selected design-build team completes the final design, obtains required permits, and constructs the project.

The selected design-build team and NCDOT will implement a public information program to keep people informed about the project's final design, construction activities, and any temporary greenway, lane, or ramp closures. The public information program will also provide contacts for people to ask questions and raise concerns about the project construction.



# Project Commitments

## I-440 Improvements

*From south of Walnut Street to east of Wade Avenue*

Wake County, North Carolina

STIP Project No. U-2719

Project WBS No. 35869.1.2

Federal Aid Project No. IMSNHS-0440(10)

**This chapter identifies the special commitments to avoid, minimize, or mitigate project impacts.**

This “Green Sheet” identifies the special commitments to avoid, minimize, or mitigate project impacts. The commitments are organized by the responsible NCDOT unit.

### **NCDOT Project Management Unit and NCDOT Environmental Analysis Unit**

- To maintain the “No Adverse Effect” determination for the Oak Grove Cemetery, the NCDOT will conduct outreach with the Method community and the City of Raleigh regarding the potential aesthetic treatments for the selected Build Bridge to North Alternative. (See **Section 4.3.2** on coordination efforts up to the FONSI.)
- To maintain the “No Adverse Effect” determination for the Berry O’Kelly School Historic District, during final design NCDOT will conduct outreach with the Method neighborhood and the Raleigh Parks and Recreation Department to discuss potential aesthetic treatments and/or a potential public art project for the community side of the noise wall adjacent to the historic site/ Method Community Park. (See **Section 4.3.2** on coordination efforts up to the FONSI.)

- NCDOT will work with the NC Museum of Art (NCMA) to develop a Memorandum of Agreement to define mitigation measures that will reduce impacts to Museum Park property to *de minimus* levels. NCDOT will contribute funds to NCMA’s stream restoration projects for stream segments on NCMA property in an amount that will vary with the actual acreage impacted.

### **NCDOT Hydraulics Unit**

- Through final design and construction, NCDOT will continue coordination with the City of Raleigh regarding their planned project to relocate the White Oak Lake dam and to modify the lake.
- During final hydraulic design, NCDOT will coordinate with the City of Raleigh Stormwater Services for information on any ongoing stormwater studies being conducted by the City in the project area.

- The NCDOT Hydraulics Unit will coordinate with FEMA/NC Floodplain Mapping Program and local authorities to ensure compliance with applicable floodplain management ordinances. Since this project involves construction on or adjacent to FEMA regulated streams at Walnut Creek and House Creek, the construction contractor shall submit sealed as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

#### **NCDOT Division 5**

- During the construction phase of the project, NCDOT will coordinate with Meredith College to accommodate college events to the extent practicable and to address security concerns.
- During the construction phase of the project, NCDOT will coordinate with the Arboretum to accommodate Arboretum events to the extent practicable.
- The NCDOT will coordinate construction of the I-440 improvement project (U-2719) with construction of the Blue Ridge Road grade separation over the CSX/NCRR railroad tracks near the State Fairgrounds (Project U-4437).
- During construction, NCDOT will coordinate with the NC State Fairgrounds (including NC Department of Agriculture and Consumer Services), Carter-Finley Stadium, NC State University Wolfpack Club, PNC Arena, Gale Force Sports (Division of Carolina Hurricanes), NC State Highway Patrol, and City of Raleigh Police Department regarding traffic flow during construction for major events at these venues.
- During construction, NCDOT will coordinate with the Wake County Public School System, transit agencies, and emergency response providers. NCDOT will coordinate with these service providers regarding detour routes and associated route changes that may be necessary during construction.

#### **NCDOT Design-Build Unit and NCDOT Division 5**

- The NCDOT will coordinate with the City of Raleigh and the Town of Cary regarding cost-sharing for sidewalks, multi-use paths, noise walls, and landscaping. Municipal Agreements will be prepared, as applicable, prior to project construction.
- NCDOT will coordinate with Meredith College and the City of Raleigh on the final design of the relocated Reedy Creek Greenway to be constructed as part of Project U-2719. The greenway will be relocated adjacent to I-440, similar to where it is today, and the design for the relocated greenway will include retaining the culvert under Wade Avenue that connects Meredith College properties.
- During final design, NCDOT will coordinate with Meredith College on utilizing lower height roadway poles, painted black and with Dark Sky approved lights, in the I-440/Hillsborough Street interchange area and along the I-440 median between Hillsborough Street and Wade Avenue. Based upon the design of the Slight Detour Alternative-Revised, high mast poles are required in the I-440/Wade Avenue interchange area. These high mast light poles will be located as far from the Meredith College campus boundary as practicable and will utilize Dark Sky approved lights. The high mast poles will be galvanized steel and cannot be painted black due to maintenance requirements.
- During final design, NCDOT will coordinate with NC State University regarding lighting design along I-440 adjacent and near to NCSU greenhouses located between Western Boulevard and Hillsborough Street.
- During final design, NCDOT will consider incorporating a turnaround or cul-de-sac at the end of Ravenwood Drive if reasonable and feasible. NCDOT will coordinate with the Right of Way Unit if additional right of way is needed.
- During final design, NCDOT will consider lengthening the existing left turn lane from eastbound Wade Avenue to Ridge Road if this can be done without increasing the project footprint or adversely affecting traffic operations. This will be mentioned in the design-build Request for Proposal.

- NCDOT will coordinate with the design-build teams regarding maintenance of traffic plans so that construction at crossings of I-440 along the project corridor will be phased to maintain connectivity across I-440.
- The driveway access study prepared during final design will consider the request for median breaks and/or painted medians as well as driveway access along Jones Franklin Road.
- NCDOT will consider a design exception to reduce the inside shoulder width to less than the standard width if proposed by the design-build teams during final design.
- NCDOT will coordinate the construction of the I-440 Improvements project and the Avent Ferry Road project.
- NCDOT will consider keeping the Ligon Street existing traffic culvert open during construction to the extent practicable.

#### **NCDOT Right of Way Unit and NCDOT Division 5**

- NCDOT will coordinate with NC State University and the University Club during final design to explore potential options to address displacement of University Club facilities and the NC State Athletics golf practice facility.
- To maintain the No Adverse Effect determination for the historic portion of Meredith College, NCDOT will, in consultation with Meredith College, develop a landscaping plan for the western edge of campus where it abuts new right of way.

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# 1 CHAPTER

## Description of Proposed Action

### 1.1 General Project Description

NCDOT, in cooperation with the FHWA, proposes to widen I-440/US 1-64 from south of Walnut Street (SR 1313) to east of Wade Avenue (SR 1728) from four lanes to six lanes in the City of Raleigh, and the Town of Cary, all in Wake County. The project will also reconstruct interchanges, replace structures, and repair pavement conditions. **Exhibit 1** shows the project location.

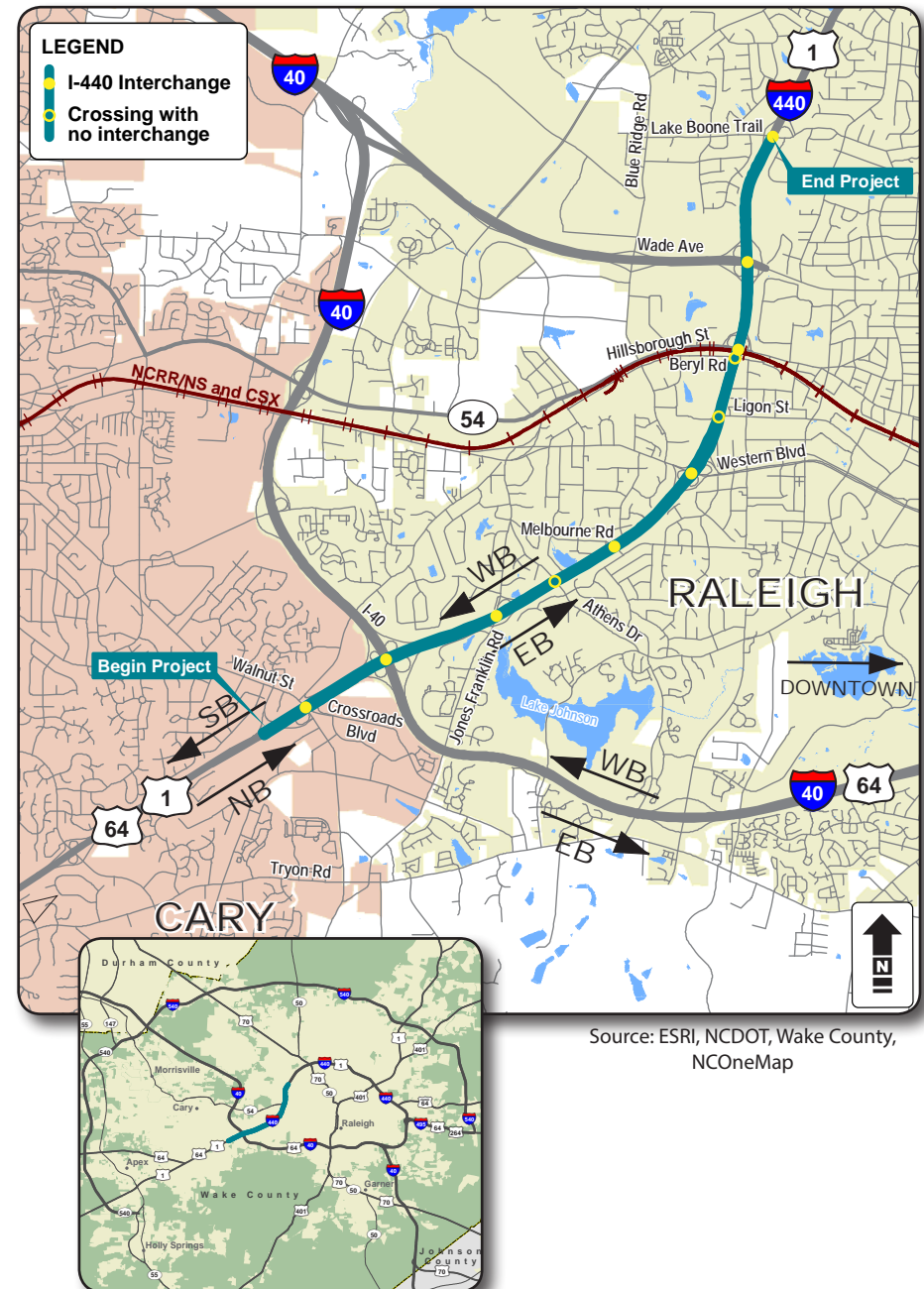
The project is included in NCDOT's adopted 2018-2027 State Transportation Improvement Plan (STIP) as project number U-2719 and is scheduled for right of way acquisition and construction to begin in fiscal year 2019, being let as a design-build contract. The project is also included in the Capital Area Metropolitan Planning Organization Organization's (CAMPO) 2040 *Metropolitan Transportation Plan (MTP)* (April 2013) and 2045 *MTP* (February 19, 2018).

### 1.2 Project Purpose and Need

The purpose of the proposed project is to improve traffic flow, make the roadway operate more efficiently, and enhance mobility on this segment of I-440. The project will address the need to increase capacity, improve the layout of the roadway and interchanges, and fix poor conditions along the project corridor.

I-440 forms a partial loop around the north, east, and west of downtown Raleigh, with I-40 forming the southern part of the route. I-440 is a primary connector in the Triangle area, and population growth (the population of Raleigh has nearly doubled between 2000 and 2010) has led to higher traffic volumes along the project corridor, particularly during peak travel hours.

Exhibit 1: Project Location



Generally, within the project study area, I-440 is a four-lane median divided freeway facility with auxiliary lanes between interchanges. The rest of I-440 outside the project area has three through lanes in each direction. Bottlenecks occur in the project area when I-440 reduces from three lanes to two lanes; which occurs on westbound I-440 near the Wade Avenue interchange and eastbound I-440 near the Jones Franklin Road interchange.

The need for improvements in the study area can be seen through the capacity deficiencies, out-of-date design elements, and older age of the facility (constructed in the early 1960's). Six of the fifteen bridges within the corridor no longer meet minimum federal roadway and bridge design standards, and three of the fifteen are structurally deficient.

Average daily traffic volumes in Year 2012 along I-440 ranged from 79,200 to 134,200 vehicles per day (vpd). By 2035, with no changes to the project corridor, traffic volumes are projected to increase 19 to 26 percent, ranging from 96,400 to 169,600 vpd (EA Section 2.3). Through 2040, traffic volumes are projected to continue to increase (see **Section 5.2**).

The forecasted increase in traffic volumes will worsen conditions for roadway users. The volume of traffic on the existing project corridor already approaches or exceeds the acceptable level of service (LOS) during peak hours, including intersections. Crash rates (crashes per hundred million vehicle miles traveled) along the project corridor from 2009 to 2012 were approximately three times higher than the statewide average rate for urban interstates, with almost an average of one crash occurring every day.

## 2 CHAPTER

# Alternatives Evaluated in the EA

This chapter summarizes Sections 2.1 and 2.2 of the EA. For updates to alternatives since the EA, see **Chapter 5** of this FONSI.

## 2.1 Alternatives Development Process

A multi-step screening process was used to identify the alternatives studied in detail in the EA. Each step in the process eliminated alternatives and allowed the project team to develop more details for the remaining alternatives.

The first screening evaluated the ability of general approaches to meet the project purpose based on a set of screening criteria. For this project, only the Improve Existing Corridor approach made it through the first screening, along with the No-Build Alternative (required to always be an option).

The second screening compared sketch designs for improving the I-440 mainline and crossings, and eliminated those that were unreasonable, impractical, and/or had higher impacts or less improvement to traffic flow.

The third screening developed more details in conceptual designs, and compared the designs on how well they would operate and their potential impacts. Multiple conceptual designs were evaluated for the I-440 mainline and at each interchange and grade separation in this third screening, as described in Section 2.1.2 of the EA.

The conceptual designs and analysis results were presented for public and agency input (Public Meeting held November 14, 2014). The Detailed Study Alternatives for the I-440 mainline, interchanges, and grade separations were finalized after considering this input.

Preliminary designs were then prepared for the Detailed Study Alternatives. Preliminary designs include additional design details that are



not included in the conceptual designs; such as turn lanes at intersections, preliminary construction footprints, and right of way limits.

Each of the Detailed Study Alternatives for a project element (interchange or grade separation) could be combined with any of the others, along with the mainline widening, to create the improvements for the entire corridor. There were 36 different possible combinations of the Detailed Study Alternatives to get from the beginning of the project south of Walnut Street to the end of the project near Lake Boone Trail.

## 2.2 Detailed Study Alternatives in the EA

The Detailed Study Alternatives evaluated for the I-440 mainline and each interchange and grade separation are shown in **Exhibit 2**. At each interchange and grade separation, there were one to three Detailed Study Alternatives evaluated.

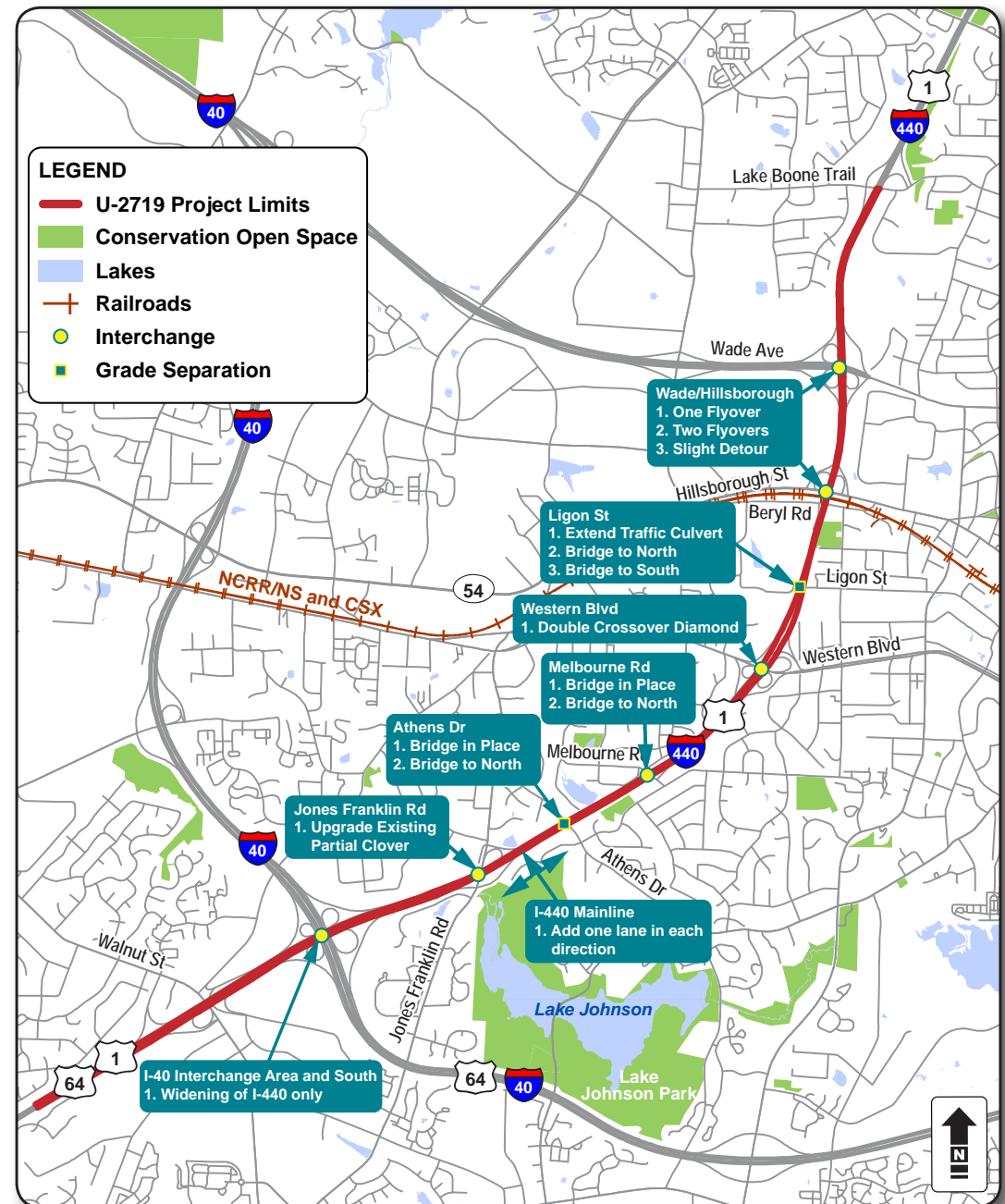
The preliminary designs for these Detailed Study Alternatives are shown in Appendix B of the EA and described in EA Section 2.4.

At the start of the preliminary design, design criteria were prepared for design items such as number of lanes, lane widths, shoulder widths, maximum gradient, minimum curve radii, anticipated speed limits, and other elements (EA Appendix B). The proposed posted speed limit on I-440 will be 60 to 65 mph.

NCDOT coordinated with the City of Raleigh and the Town of Cary to incorporate their preferences in the design criteria, where practicable, for the travel lanes, sidewalks, and bicycle accommodations on the roads crossing I-440.

In addition to design criteria, many other factors influenced the preliminary designs. These included maintaining traffic flow during construction and minimizing impacts to surrounding land uses and resources.

Exhibit 2: Detailed Study Alternatives



Source: ESRI, NCDOT, Wake County, NCOneMap

# 3 CHAPTER

## Updates to the Environmental Assessment

This chapter describes:

- Errata (errors) in the EA
- Updates to the status of resources in the project area since the EA
- Resources in the project area identified after the EA
- Updates to the impacts from the Detailed Study Alternatives to account for the new and updated resources

### 3.1 Errata

This section lists errors in the EA identified after publication.

Chapter 3 - Project Impacts: A summary of the Final Indirect Screening Report (March 5, 2015) should have been included in Chapter 3 - Project Impacts. This report was listed in the references cited for Chapter 3 on page 3-59 of the EA. A summary is provided below.

The Indirect Screening Report analyzed growth trends, transportation projects, and potential development in the project area through the year 2035 for potential for indirect and cumulative effects. The results of the indirect land use effects screening tool reflected low concern for indirect effects potential, and the contribution of the proposed project to cumulative impacts on human and/or natural features resulting from current and planned development was determined to be negligible.

Based on the current design alternatives, major travel patterns in the study area are not expected to change as a result of the project, nor will the project provide new interchanges. Although access to major roadways and water/sewer service availability are not limiting factors for development, there is very limited available land in the study area. Development and redevelopment projects that may occur in the study

area are not dependent upon construction of the project, but rather upon market conditions and land availability.

Notable indirect impacts to water resources as a result of the proposed project are not anticipated. The project will follow the existing alignment of I-440 and only one new stream crossing is proposed, located at an unnamed tributary to Walnut Creek at the Capital Center Drive/Denise Drive extension. State and local plans and ordinances are in effect to protect water resources in the study area, and the NCDOT will acquire any applicable water quality permits that may be required to construct the new crossing.

To determine the potential for cumulative effects, impacts of other reasonably foreseeable transportation projects and land development attributable to population and employment growth in the study area were considered. For purposes of cumulative impacts, fiscally constrained transportation projects with the potential to have environmental impacts were identified.

None of the proposed transportation projects in the area will provide new access to roadways or available land in the study area, and therefore are not anticipated to contribute to a cumulative effect on land use decisions in the study area.

Ongoing and planned land development projects considered in this analysis include planned development in the northwestern portion of the study area (NCSU Centennial Biomedical Campus), redevelopment of an existing hotel in the southwestern portion of the study area, and the scattered development and redevelopment of individual lots/parcels. These projects are consistent with local land use plans for future growth and development. Cumulative effects, in the form of changes in land use, will be mitigated by existing development regulations including zoning ordinances, comprehensive land use plans, and area plans. The project is located in an urban area where growth is anticipated and land use change is controlled by local governments.

Water resources are the most likely natural resources to be impacted from a cumulative effects perspective. However, effects would be minimized through enforcement of local water supply watershed ordinances, riparian buffer rules, and continued adherence to local comprehensive land use

plans. During construction, use of best management practices, such as NCDOT's *Best Management Practices for the Protection of Surface Waters* (March 1997) will minimize water quality impacts.

Appendix B.2 pages B-13 and B-14 - Design Mapbook: Preliminary design maps in the EA (Figure 5a and 5b) for the Detailed Study Alternatives at the Melbourne Road interchange incorrectly show traffic signals being installed at the Melbourne ramp termini. Traffic signals also are incorrectly shown at these ramp termini on the Public Hearing Map for this area. The ramp termini intersections with Melbourne Road are proposed to be stop-controlled.

Appendix C, Page C-5: Impact Summary Table – Part 1 – South of Walnut St to Ligon St: This appendix incorrectly identifies the effect determination for Oak Grove Cemetery at Ligon Street as “No Adverse Effect” for the Bridge to South Alternative. The correct effect determination for Oak Grove Cemetery is “Adverse Effect” for the Bridge to South Alternative. This effect determination is correctly stated in other sections of the EA.

Appendix C, Page C-5: Impact Summary Table – Part 1 – South of Walnut St to Ligon St: This appendix incorrectly lists Oak Grove Cemetery under Section 6(f) Resource Impacts. Oak Grove Cemetery is not a Section 6(f) resource (see Section 3.4.2 of the EA).

Appendix C, Page C-10: Impact Summary Table - Part 1 – Hillsborough St/ Wade Ave Interchange Area and Reedy Creek Greenway Relocation: The effect determination for Meredith College is incorrectly listed as both “No Effect” and “No Adverse Effect” for each Detailed Study Alternative for the Hillsborough Street/Wade Avenue interchange area. The effect determination for Meredith College from all Detailed Study Alternatives should have been listed as “No Effect” (see page D-16 of the EA). This determination was based on the boundary for the historic portion of Meredith College that was current at the time of publication of the EA. The boundary was updated after the EA was published, as described in **Section 3.2**.

## 3.2 Cultural Resources Updates

This section describes updates relating to Berry O’Kelly School Historic District, Oak Grove Cemetery, and the historic portion of Meredith College.

### Berry O’Kelly School Historic District

Berry O’Kelly School was determined eligible for listing on the National Register of Historic Places (NRHP) based upon a historic architectural survey conducted in support of the project (New South Associates, December 2013), as summarized in the EA.

As an update to the EA, the district was listed on the NRHP on May 1, 2017. In terms of impact considerations, a resource determined eligible for listing on the NRHP is treated by NCDOT the same as a resource actually listed on the NRHP. Therefore, no further updates were necessary regarding the effects of the project on this resource.

### Oak Grove Cemetery

Oak Grove Cemetery was determined eligible for listing on the NRHP based upon a historic architectural survey conducted in support of the project (New South Associates, December 2013), as summarized in the EA.

After publication of the EA, NCDOT became aware of a survey commissioned by the Raleigh Historic Development Commission and the City of Raleigh that used ground penetrating radar to identify the extent of marked and unmarked graves in the cemetery (New South Associates, November 21, 2016). A review of this report showed that none of the marked and unmarked graves are located outside the cemetery parcel boundary shown on maps in the EA.



## Meredith College

On January 31, 2017, a request was made by Meredith College to the NC State Historic Preservation Office (NC HPO) to consider expanding the area of Meredith College determined eligible for the NRHP based upon additional information they provided to NC HPO.

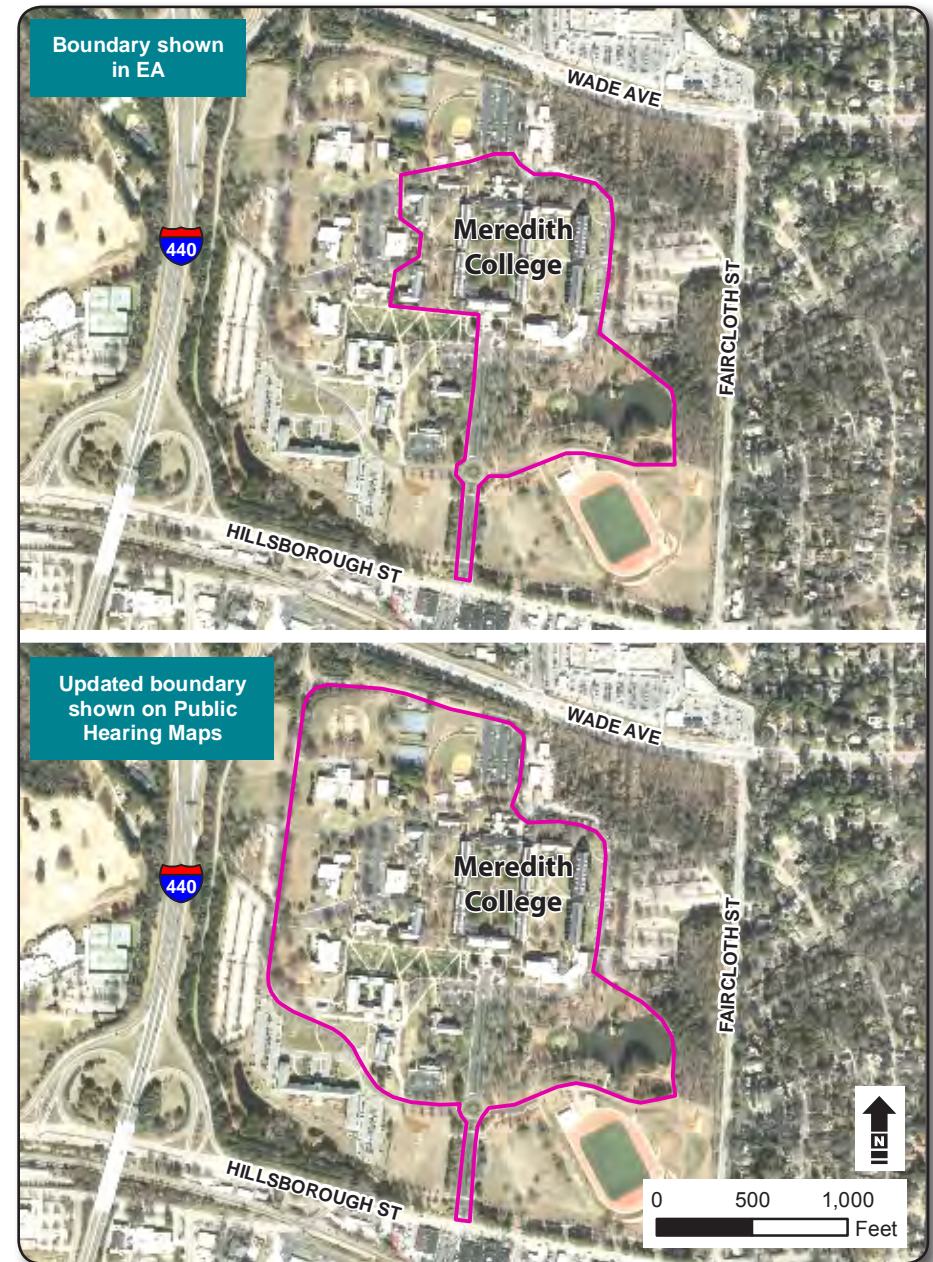
In a letter dated August 2, 2017 (**Appendix B.2**), NC HPO revised the boundary of the portion of Meredith College determined eligible for listing on the NRHP. The previous boundary was shown in the EA, and the expanded boundary was shown on the Public Hearing Maps. These are shown on **Exhibit 3**.

On August 22, 2017, NC HPO and FHWA reviewed the preliminary designs presented in the EA in relation to the expanded boundary agreed upon on August 2, 2017, and determined that the proposed Detailed Study Alternatives would have No Effect (One Flyover) or No Adverse Effect (Slight Detour and Two Flyovers) on the historic portion of Meredith College. The effects determinations are documented in a concurrence form for assessment of effects dated September 7, 2017 (**Appendix B.2**). As a condition of the effects determination for each Detailed Study Alternative, NCDOT must, in consultation with Meredith College, develop a landscaping plan for the western edge of campus where it abuts new right of way needed for the proposed project.

On December 19, 2017, Meredith College requested to be formally designated a Consulting Party under Section 106 of the National Historic Preservation Act of 1966. FHWA designated Meredith College a Consulting Party on December 21, 2017 (**Appendix B.2**).

On December 29, 2017, Meredith College requested NC HPO reconsider the historic boundary for Meredith College and on January 31, 2018, Meredith College asked FHWA if they concurred with the August 2017 boundary for Meredith College. Meredith College also raised concerns to FHWA on March 2, 2018 about compliance with Section 106 of the Historic Preservation Act and asked FHWA to seek review from the Advisory Council of Historic Preservation (ACHP), which FHWA did on March 5, 2018 (**Appendix B.2**).

**Exhibit 3: Meredith College Historic Boundary Changes**



Source: ESRI, NCDOT, Wake County, NC Center for Geographic Information & Analysis

In a letter dated March 15, 2018 from FHWA to the NC HPO, FHWA stated they concurred with the Meredith College historic boundary of August 2, 2017. ACHP provided their advisory opinion on April 2, 2018, finding that FHWA made a reasonable and good faith effort to comply with the ACHP's four-step process in identifying boundaries eligible for the NRHP and that FHWA, NCDOT, and NC HPO adhered to the procedures set forth in the relevant laws (30 CFR Section 800 5(2)(b)) (**Appendix B.2**).

### 3.3 Streams and Wetlands Updates

Two updates to streams and wetlands are described below. One is a minor expansion of the study area boundary and the second is the addition of a stream inadvertently left off the initial inventory.

After publication of the EA, the project study area was expanded to completely encompass the proposed designs for Moore Drive on Meredith College property north of Wade Avenue, as shown in **Exhibit 4**.

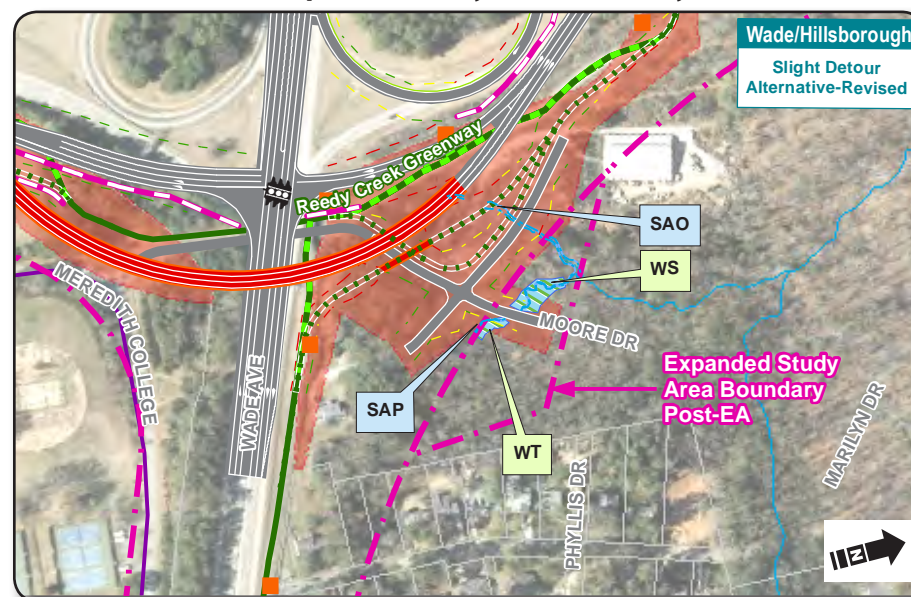
Two unnamed intermittent tributaries to House Creek (Stream SAO and Stream SAP) and two small wetlands (Wetland WS and Wetland WT) were identified in this area to be added to the jurisdictional resources inventory of the project. These new resources were delineated in a field visit on January 11, 2018 and documented in a memo dated March 26, 2018.

In addition, an unnamed perennial tributary to House Creek (Stream SAN) was discovered to have been surveyed with the original studies conducted in 2013, but inadvertently left off the electronic mapping files. This stream connects to House Creek where it crosses under I-440 at the northern boundary of Museum Park, as shown in **Exhibit 5**.

**Table 1** lists the impacts to these resources from the One Flyover Alternative, Two Flyover Alternative, and Slight Detour Alternative for the Hillsborough Street and Wade Avenue interchange area.

These updated impacts are documented in an addendum to the memorandum titled, *Methodology and calculations for impacts from the U-2719 Preliminary Designs to jurisdictional streams, ponds, wetlands, and riparian buffers, including updates since the publication of the Environmental Assessment* (Atkins, March 7, 2018).

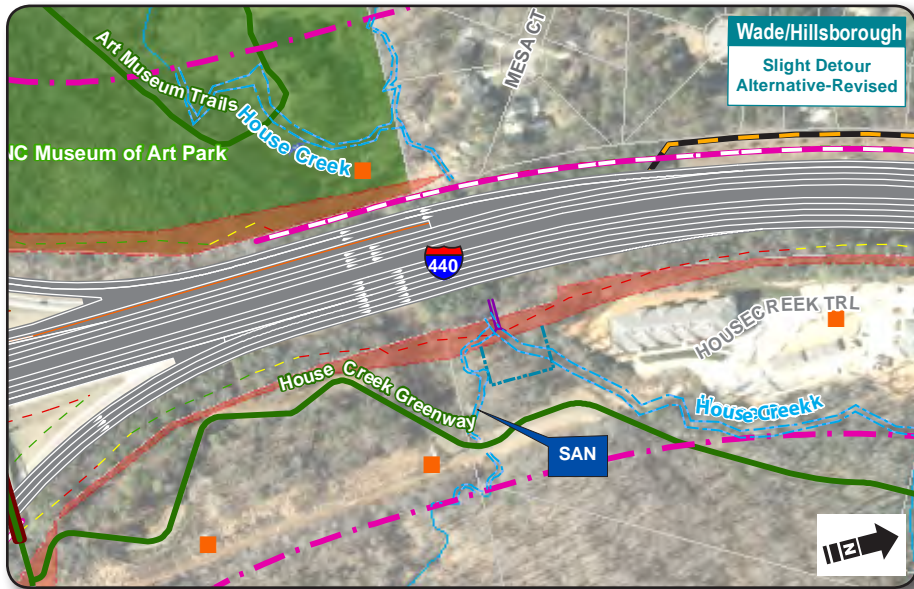
**Exhibit 4: Expanded Study Area Boundary Post-EA**



Source: ESRI, NCDOT, Wake County, NC Center for Geographic Information & Analysis



Exhibit 5: Stream SAN



Source: ESRI, NCDOT, Wake County, NC Center for Geographic Information & Analysis

Table 1: Updates to Stream and Wetland Impacts for EA Detailed Study Alternatives

Resource	One Flyover Alternative	Two Flyovers Alternative	Slight Detour Alternative
Stream SAN	78 lf perm 80 lf temp	78 lf perm 80 lf temp	78 lf perm 80 lf temp
Stream SAO	207 lf perm	0	207 lf perm
Stream SAP	131 lf perm	0	135 lf perm
Wetland WS	0.05 acre	0	0.04 acre
Wetland WT	0.03 acre	0	0.03 acre
<b>Updated totals for all streams/wetlands in interchange area</b>			
Intermittent Streams	413 lf perm 24 lf temp	75 lf perm 25 lf temp	417 lf perm 25 lf temp
Perennial Streams	542 lf perm 384 lf temp	628 lf perm 471 lf temp	544 lf perm 384 lf temp
Wetlands	0.08 acre	0.0 acre	0.07 acre

Source: Memo - Methodology and calculations for impacts from the U-2719 Preliminary Designs to jurisdictional streams, ponds, wetlands, and riparian buffers, including updates since the publication of the Environmental Assessment (Atkins, March 7, 2018)

lf = linear feet; perm = permanent impacts; temp = temporary impacts

### 3.4 Protected Species Updates

This section updates information on the endangered plant Michaux’s sumac and on the bald eagle.

The EA included a project commitment that “NCDOT will conduct re-surveys of the project study area for Michaux’s sumac in 2017, prior of the publication of the final environmental document” (EA page PC-2).

The project study area was resurveyed in June and July 2017 for Michaux’s sumac (Atkins, July 2017). The expanded study area around Moore Drive described in Section 3.3 also was surveyed for Michaux’s sumac in January 2018.

No specimens of Michaux’s sumac were found during the June/July 2017 resurveys of the project study area. No suitable habitat was found in the expanded study area around Moore Drive. The biological conclusion of No Effect stated in the EA remains unchanged.

Bald eagle resurveys also were performed in June and July 2017 in accordance with NCDOT guidelines. No specimens or nests were observed.

On May 3, 2018, the United States Fish and Wildlife Service (USFWS) listed the yellow lance (*Elliptio lanceolata*) as a Threatened species potentially occurring within Wake County. The USFWS also lists the Cape Fear shiner (*Notropis mekistocholas*) and the Tar River spiny mussel (*Parvaspina steinstansana*) as Endangered species potentially occurring within Wake County due to a new listing based on range by basin. The Endangered dwarf wedgemussel (*Alasmadonta heterodon*) is also listed in Wake County as discussed in the EA Section 3.12.2. On May 15 and 16, 2018, a survey of the project study area was performed by Three Oaks Engineering biologists Tim Savidge and Nancy Scott for the yellow lance, Tar River spiny mussel and dwarf wedgemussel, and the biological conclusion for these species is “No Effect”. Although the Cape Fear shiner is listed for Wake County, this species is found only in the Cape Fear River basin. Since the project study area is in the Neuse River Basin and not the Cape Fear River Basin, the biological conclusion for the Cape Fear shiner is “No Effect”.

# 4 CHAPTER

## Agency Coordination and Public Involvement

### 4.1 Timeline Summary

NCDOT worked with local officials, stakeholders, and the public throughout the project development process for this project. Multiple public meetings, stakeholder advisory committee meetings, and small group meetings, as well as agency coordination, has occurred since project planning began in 2012. Chapter 4 of the EA summarizes the activities that occurred prior to the publication of the EA.

Distribution of the EA is described in the Note To Reader section of the EA. The EA was made available for review at various public locations in the project area and on the Internet at [www.ncdot.gov/projects/i-440improvements](http://www.ncdot.gov/projects/i-440improvements).

Agency coordination activities (Section 4.2) and public involvement (Section 4.3) occurring after the EA are described in this chapter, along with a summary of the comments received during the public comment period for the EA (Section 4.4). A timeline of these activities is provided in Table 2.

**Table 2: Timeline of Agency and Public Involvement After EA Publication**

Date	Agency or Public	Activity or Event
6/23/17	Both	Environmental Assessment signed
8/4/17	Agency	Committee meeting - Stakeholder Advisory Committee
8/8/17	Public	Public Hearing
8/10/17	Public	Small group meeting – Blue Ridge Corridor Alliance
9/5/17	Public	Small group meeting – open house for Meredith College students, faculty and staff
9/8/17	Both	Public comment period on the EA closes
9/10/17	Public	Small group meeting – Hillsborough Street Community Service Corporation
10/12/17	Public	Small group meeting – Blue Ridge Corridor Alliance
10/19/17	Public	Small group meeting – Method Boys to Men Club
10/31/17	Agency	Post-Hearing Meeting to review comments
11/14/17	Public	Small group meeting – Method community
2/14/18	Agency	Meeting – Agency Coordination Team
2/28/18	Public	Small group meeting – Method Aesthetic Committee
3/14/18	Public	Small group meeting – Method Aesthetic Committee

### 4.2 Agency Coordination

#### 4.2.1 Stakeholder Advisory Committee

The Stakeholder Advisory Committee, formed at the beginning of the planning study, is comprised of study-area groups, as listed in Section 4.5 of the EA. These include local governments (e.g. City of Raleigh, Capital Area Metropolitan Planning Organization, etc.) and major stakeholders in the project area (e.g. Meredith College, NC State University, West Citizens Advisory Committee, etc.). Members offered input and local knowledge valuable in developing and evaluating project alternatives.

The committee met three times. The first meeting (November 1, 2012) was held to discuss the start of the study and the purpose and need for the project. The second meeting (October 1, 2014) was held to discuss the alternatives recommended for detailed study in the EA.



The third meeting (August 4, 2017) was held to discuss the EA and the preliminary engineering designs of the Detailed Study Alternatives as shown on the Public Hearing Maps. Attendees asked questions about the Detailed Study Alternatives and received clarification on design details.

## 4.2.2 Agency Coordination Team

As discussed in Section 4.6 of the EA, many federal, state, and local agencies have jurisdiction in the project area due to their geographic boundaries and/or regulatory responsibilities. Regular coordination with these environmental resource and regulatory agencies helps streamline permitting and decision-making processes.

The agency coordination team includes:

- Federal Highway Administration (FHWA)
- US Army Corps of Engineers (USACE)
- US Environmental Protection Agency (EPA)
- US Fish and Wildlife Service (USFWS)
- NC Division of Water Resources
- NC Wildlife Resources Commission (NCWRC)
- NC Historic Preservation Office (NC HPO)
- Capital Area Metropolitan Planning Organization (CAMPO)

This team also is called the NEPA/404 Merger Team because it addresses requirements under both the National Environmental Policy Act and Section 404 of the Clean Water Act at the same time. This facilitates getting a permit from the US Army Corps of Engineers (USACE) under Section 404 if a project impacts streams and wetlands. The agency coordination team meets at project milestones for concurrence on the project's progress (Concurrence Points). All signed concurrence forms are included in **Appendix B.1**.

Prior to publication of the EA, the agency coordination team met on August 22, 2012 and concurred on the project's purpose and need (Concurrence Point 1). On March 12, 2015, the team met and concurred on the alternatives recommended for detailed study (Concurrence Point 2).

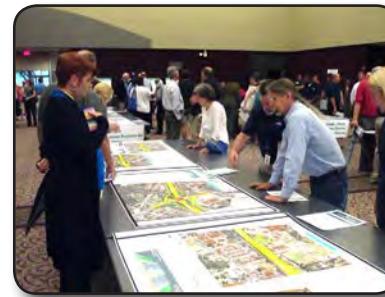
After publication of the EA, the team met on February 14, 2018, to discuss the bridging and alignment decisions for the Detailed Study

Alternatives (Concurrence Point 2a), the Least Environmentally Damaging Practicable Alternative (LEDPA) (Concurrence Point 3), and avoidance and minimization measures (Concurrence Point 4a). The agencies concurred on the bridging and alignment decisions at the meeting. The agencies requested some additional documentation and identification of NCDOT's selected alternative before concurring on Concurrence Points 3 and 4a. These forms were signed in April 2018. The LEDPA is the same as the Selected Alternative described in **Chapter 6**.

## 4.3 Public Involvement

### 4.3.1 Open House and Public Hearing

NCDOT held an open house (4:00-6:30 pm) and a Public Hearing (beginning at 7:00 pm) on August 8th, 2017, at the McKimmon Center, located at 1101 Gorman Street, Raleigh, NC 27606. Approximately 382 citizens attended the open house/hearing.



Open House 8/8/2017



Open House 8/8/2017



Public Hearing 8/8/2017

The open house provided a forum for attendees to review preliminary designs, the EA, and project information. Attendees could ask questions and have one-on-one discussions with the project team. Interactive and informative stations gave participants the opportunity to view the preliminary designs for the Detailed Study Alternatives, find information about traffic noise and right of way acquisition, and explore the project's 3D model using virtual reality tools.

The Public Hearing was held in an adjacent room immediately following the open house session. The Public Hearing began with a formal presentation by NCDOT, which included an overview of the project and the alternative selection process, project costs and impacts, right of way acquisition and relocation assistance information, and next steps for the project. After the presentation, speakers were invited to come to the microphone and provide their comments, which were recorded and documented in a Public Hearing transcript.

The open house/hearing was announced via a postcard, press releases, newspaper and radio advertisements, and website postings. Local media outlets also ran stories prior to the meeting with information about attending the meeting.

The hearing also served as the public meeting for the USACE under Section 404 of the Clean Water Act. The USACE issued a Public Notice for the EA and hearing on July 13, 2017, which is included in **Appendix B.4**.

A summary of the Public Hearing is in the *I-440 Improvement Project Public Hearing Summary* (Atkins, January 2018).

### 4.3.2 Other Public Outreach

This section describes small group meetings conducted after publication of the EA and coordination conducted with the Method community related to historic resources.

#### Small Group Meetings

After the EA was published, several groups requested meetings to provide their members opportunities to learn about the project and ask questions.

NCDOT attended meetings with the Blue Ridge Corridor Alliance (August 10, 2017 and October 12, 2017) and the Hillsborough Street Community Service Corporation (September 21, 2017) at their request to provide project status updates and answer questions.

At the request of Meredith College, NCDOT coordinated with the college to hold an open house in the Cates Student Center on Meredith's campus on September 5, 2017 from 12:00 – 2:00 pm. Meredith College requested this open house since the College was not in session at the time of the Public Hearing (August 8, 2017).

The same maps and materials presented at the Public Hearing were shown at this open house. NCDOT gave the Public Hearing presentation twice during the open house. Approximately 75 people in total were present at the presentations. Additional people came to view the project information but did not attend the presentations.

#### Coordination with the Method Community

NCDOT conducted additional coordination activities with the Method community to begin fulfilling the following project commitments in the EA (Page PC-1):

*"To maintain the "No Adverse Effect" determination for the historic Oak Grove Cemetery if the Ligon Street Build Bridge to North Alternative is selected, during final design NCDOT will conduct outreach with the Method neighborhood and the City of Raleigh regarding potential aesthetic treatments for the new bridge."*

*"To maintain the "No Adverse Effect" determination for the Berry O'Kelly School Historic District, during final design NCDOT will conduct outreach with the Method Neighborhood and the Raleigh Parks, Recreation, and Cultural Resources Department to discuss potential aesthetic treatments and/or a potential public art project for the community side of the [noise] wall adjacent to the historic site/Method Community Park."*

The Method community is generally located along either side of Method Road south of Beryl Road. Two historic resources determined eligible for the National Register of Historic Places are located in this community: Oak Grove Cemetery and Berry O'Kelly School Historic District (EA Page 3-15).

A meeting was held on October 19, 2017, with the Method Boys to Men Club, a prominent group in the community, to request their assistance in advertising the community meeting held November 14, 2017. The community meeting was held at the Method Community Park Pioneers Building to provide project information to Method community residents and property owners, discuss their preference of alternative for the Ligon Street grade separation, and to request volunteers for a committee on bridge and noise wall aesthetic treatments. Approximately 39 people attended the meeting and six people volunteered for the aesthetic committee. After discussion at the meeting, attendees generally supported the Build Bridge to North Alternative for the Ligon Street grade separation.

Aesthetic Committee meetings were held on February 28, 2018, and March 14, 2018. NCDOT presented options for bridge railings, bridge retaining wall surface treatments, and noise wall surface treatments for the community side of the noise wall preliminarily recommended along the shoulder of eastbound I-440 from Ligon Street eastward past Method Community Park.

The committee's preferences will be incorporated into the design of the Ligon Street grade separation bridge and the noise wall. In addition, the committee was in favor of having a public art project along sections of noise wall adjacent to the Berry O'Kelly School Historic District/Method Community Park. They suggested formed concrete images depicting the Berry O'Kelly School be incorporated into the noise wall panels. NCDOT will hire a consultant to work with the Aesthetic Committee and to design the special concrete panels.

## 4.4 Comments Received During the EA Comment Period

### 4.4.1 Overview

The formal public comment period ended on September 8, 2017. All comments received at the Public Hearing and over the course the comment period, are included in **Appendix C**, along with responses to the comments. Due to the large numbers of comments received, there is an

introduction in **Appendix C** explaining the organization of the comments and responses, and **Appendix C.2** includes a table of the most common comments received and responses to these comments.

Comments were received via the Public Hearing transcript, comment forms provided at the Public Hearing open house, emails, letters, and an on-line forum accessible from the project website.

Comments received under the USACE Section 404 Public Notice were forwarded to NCDOT by the USACE. Four citizens and two agencies (US Fish and Wildlife Service and National Marine Fisheries Service) submitted comments under this notice. All comments received under this notice are included in **Appendix C**.

NCDOT collected the following numbers of comments during the comment period:

- 36 people provided formal verbal comments during the Public Hearing.
- 51 comments were submitted on comment forms at the Public Hearing or later mailed to NCDOT.
- 308 emails and letters were submitted, including those in response to the Section 404 Public Notice.
- 23 letters were submitted from agencies and organizations.
- 2,559 comments were submitted via the on-line comment forum.

The on-line forum included survey questions for each interchange/grade separation, as well as general questions about whether the commenter lived or worked in Raleigh or Cary, and how they used the project area of I-440. For specific interchange/grade separation locations, participants were able to choose between four answer choices: "I Don't Like It", "I Like it", "I Don't Understand", and "This Is Not Important To Me".

A post-hearing meeting was held on October 31, 2017 for NCDOT, FHWA, and CAMPO to discuss the comments received during the project's public comment period and review draft responses to comments.

At Ligon Street, additional input from the Method community was desired before recommending a selected alternative. See **Section 4.3.2** for a summary of coordination with the Method community.

Based upon a review of the public and stakeholder feedback received during the public comment period, it was recommended that the Detailed Study Alternatives for the Hillsborough Street and Wade Avenue interchange area be reviewed for opportunities to reduce right of way impacts. Design changes for this interchange area are described in **Chapter 5**.

#### 4.4.2 Summary of Agency and Local Stakeholder Comments

Listed below are governmental agencies that responded with their comments regarding the proposed project.

- National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)
- US Fish and Wildlife Service (USFWS)
- NC Department of Administration (NCDOA) - Commission of Indian Affairs
- NC Department of Environmental Quality (NCDEQ)
- NCDEQ Division of Emergency Management - Floodplain Management Program
- NCDEQ Raleigh Regional Office
- NC Department of Transportation (NCDOT) Transportation Planning Branch
- NC Division of Waste Management (NC DWM) Hazardous Waste Section
- NC DWM Inactive Hazardous Sites Branch – Central Unit
- NC DWM Solid Waste Section
- NC Division of Water Resources (NCDWR) Transportation Permitting Branch
- NC Natural Heritage Program (NHP)
- NC Wildlife Resources Commission (NCWRC)
- North Carolina Museum of Art (NCMA)

Agency comments and responses are included in **Appendix C.3**. There were no major concerns regarding the project expressed by any of the agencies listed above.

Multiple local stakeholders, listed below, also submitted comments regarding the project. These comments and responses are included in **Appendix C.3**.

- Blue Ridge Corridor Alliance (BRCA)
- Capital Area Metropolitan Planning Organization (CAMPO)
- Hillsborough Street Community Service Corporation
- Meredith College Facilities Director
- Womble Carlyle Sandridge & Rice, LLP on behalf of Meredith College
- University Club
- Nicholls & Crampton on behalf of NCSU University Club
- NCSU Faculty Club

The City of Raleigh Council discussed the I-440 project in their council meeting on September 5, 2017. They unanimously declared support for the Athens Drive Replace Bridge in Place Alternative, the Melbourne Road Replace Bridge in Place Alternative and the Ligon Street Build Bridge to the North Alternative. They also wanted the Athens Drive and Melbourne Road bridges not to be closed simultaneously during construction.

City of Raleigh staff also requested in emails and conversations that, to retain community context, the Melbourne Road bridge should remain a two-lane bridge instead of being widened to three lanes to accommodate a left-turn lane. NCDOT has agreed to this change, which will be implemented in final design (See **Section 5.2**).

A letter dated November 1, 2017, was received from Scott Douglass, Vice Chancellor for NC State University (NCSU). NCSU stated they did not support the Extend Existing Traffic Culvert nor the Build Bridge to South Alternative for the Ligon Street grade separation. NCSU notes the current culvert poses a safety risk for faculty, staff, and students traveling between the university's main campus and its facilities on Ligon Street west of I-440. They also note they have a strong interest in enhancing bicycle and pedestrian safety along Hillsborough Street and support creative treatments of the Hillsborough Street interchange to highlight both the City's investment in Hillsborough Street and the University's extensive presence in the corridor.



### 4.4.3 Summary of Public Comments

Based on the comments received, the public generally recognizes the need for and supports improvements to the project corridor, although specific concerns have been raised for each interchange and grade separation location. **Appendix C.1** includes tables tallying the preferences expressed by commenters for the various Detailed Study Alternatives.

Summaries of the most frequent comments received from the public for each location are described below. Each individual comment received was read in its entirety and responded to accordingly in the following appendices:

- **Appendix C.4** - Public Hearing transcript
- **Appendix C.5** - Comment forms
- **Appendix C.6** - Emails and letters
- **Appendix C.7** – On-line comment forum

As noted previously, **Appendix C.2** includes comments and responses for the most common comments received, which are frequently referred to in the appendices listed above.

#### Jones Franklin Road interchange

Comments made about this interchange (from all sources) showed general support for the preliminary design and the proposed sidewalks and bicycle lanes. Concerns were raised about the locations and types of medians along Jones Franklin Road, as well as residential relocations and impacts to the Learn with the Best private school. There were a number of comments received requesting design changes at specific properties.

#### Athens Drive grade separation

For the Athens Drive grade separation, the Replace Bridge in Place Alternative received the most support. Commenters cited less impacts to residences and lower costs as reasons for their preference.

Bicycle and pedestrian accommodations and noise walls were mentioned frequently in comments. Many commenters also were concerned about having multiple bridge crossings closed along the corridor at the same time during construction, particularly Athens Drive and Melbourne Road.

#### Melbourne Road interchange

Commenters on the Melbourne Road interchange showed the most support for the Replace Bridge in Place Alternative due to there being less impacts to residences and lower costs. Concerns were expressed that the proposed designs did not fit the community context of the area and could attract additional traffic. Many commenters stated the traffic signals shown on the Public Hearing Maps at the ramp termini were not needed (these traffic signals were incorrectly shown on the Hearing Maps. Stop signs are proposed at these intersections).

Topics such as bicycle and pedestrian accommodations, as well as noise walls, were mentioned in comments. Also, the topic on whether the Melbourne Road interchange ramps should remain or be removed was discussed in many comments.

Keeping Deboy Street connected to the westbound I-440 off-ramp was supported in a number of comments, as well as not widening the Melbourne Road bridge in order to minimize impacts.

Similar to comments on the Athens Drive grade separation, many commenters were concerned about having multiple bridge crossings closed along the corridor at the same time during construction, particularly Athens Drive and Melbourne Road.

#### Western Boulevard interchange

The proposed Double Crossover Diamond Alternative at Western Boulevard had general support from commenters, with strong support for bicycle and pedestrian accommodations through the interchange. Questions also were raised about how future planned bus rapid transit routes would be accommodated along Western Boulevard with the proposed design.

#### Ligon Street grade separation

Support was generally split between the three alternatives at Ligon Street, with impacts to residences and costs as the main reasons for preferences. Commenters who preferred the bridge alternatives cited wanting safer bicycle and pedestrian access as the reason for their preference. Impacts to Oak Grove Cemetery, Berry O’Kelly School Historic District, and the Method community also were mentioned. Concerns about increased

traffic along Ligon Street and noise impacts were raised for the bridge alternatives.

### *Hillsborough Street and Wade Avenue interchange area*

While many concerns were expressed regarding the Hillsborough-Wade alternatives, the Slight Detour Alternative received slightly more support from commenters that used comment forms, emails/letters, and speaking at the Public Hearing to submit their comments. Those that submitted comments via the on-line forum did not like any of the three alternatives, but when asked if they had to choose one, 69 percent chose the Slight Detour Alternative.

Due to the interchange designs' potential impacts to Meredith College and University Club, many comments were made in opposition to all Detailed Study Alternatives. Meredith College advocates expressed concerns about losing multiple acres of their campus and impacts to the commuter parking lot and an athletic field. University Club advocates expressed concerns about losing property that would displace a portion of the Club's amenities, including tennis courts and parking. University Club commenters also were concerned about the proximity of interchange ramps to the club's pool.

Elimination of the Hillsborough Street interchange to reduce impacts was a frequent suggestion made by both University Club and Meredith College advocates. Concerns also were raised about lighting, the Reedy Creek Greenway, visual impacts, noise, air quality, and compensation for losses. There were several detailed suggestions for changes to the designs of the interchanges.

Numerous requests were made by members of the JC Raulston Arboretum to keep Beryl Road open during construction to maintain access to the arboretum.

## 5 CHAPTER

# Updates to the Detailed Study Alternatives

## 5.1 Overview

During the public and agency comment period, a number of requests were made for design changes to the Detailed Study Alternatives. Most changes requested were minor, having little to no effect on traffic operations or environmental impacts. The minor changes that will be incorporated into the final design of the Selected Alternative are listed in **Section 6.1**.

Two design changes NCDOT proposes to incorporate into the project would affect traffic operations and/or impacts. These are located at the Melbourne Road interchange and at the Hillsborough Street and Wade Avenue interchange area, as described in the following **Sections 5.2 and 5.3**.

**Section 5.4** summarizes the traffic operations analysis conducted for the project that incorporate the revised designs and updated year 2040 traffic forecasts.

## 5.2 Design Revisions at the Melbourne Road Interchange

Under either Detailed Study Alternative for the Melbourne Road interchange (Replace Bridge in Place Alternative and Replace Bridge to North Alternative), the new bridge over I-440 is proposed in the EA to be three lanes wide. This provides room for a left-turn lane onto the I-440 eastbound on-ramp and for a left-turn lane at the Melbourne Road/Kaplan Drive intersection.

The City of Raleigh, at their City Council meeting on September 5, 2017, supported reducing the width of the Melbourne Road bridge over I-440 to two lanes wide. They requested the reduction in bridge width

because they felt the two-lane bridge would be more in keeping with the surrounding neighborhood context. The reduced width eliminates the left-turn lane at the on-ramp and at the Kaplan Drive intersection. The new design for the Melbourne Road bridge would still have sidewalks on both sides of the bridge and the two remaining lanes will be wide enough to accommodate bicycles.

This proposed design change would affect traffic operations at this interchange, so a new analysis was conducted to include this change.

The traffic operations analysis results from the *Year 2040 No-Build and Build Traffic Operations Technical Memorandum* (Atkins, March 2018) determined that for projected year 2040 traffic volumes, the ramp termini at Melbourne Road would operate adequately with stop signs, but a traffic signal at the Melbourne Road/Kaplan Road intersection would be needed by 2040 if forecasted traffic volumes materialize. This traffic signal would not need to be installed with the initial construction of the project, as it would not be needed until sometime in the future. The City of Raleigh would monitor the intersection for this potential future need and would install a traffic signal if warranted.

### 5.3 Design Revisions at the Hillsborough Street and Wade Avenue Interchange Area

Many public and stakeholder comments were received regarding the amount of right of way needed from the University Club and Meredith College at the Hillsborough Street and Wade Avenue interchange area. Meredith College and University Club administrators also expressed their concerns to NCDOT about the right of way needed and the impacts to facilities on their respective properties.

NCDOT responded by reviewing the One Flyover Alternative, Two Flyovers Alternative, and Slight Detour Alternative for opportunities to revise the designs to reduce right of way impacts.

In November 2017, NCDOT completed the final topographic survey information for the project study area, so there was a higher level of accuracy in the topographic information available for the area than when

the preliminary designs were first prepared using topographic data generated by aerial scanning. This allowed the design team to “tighten up” the designs using retaining walls and other features and be confident the revised designs would be feasible to construct within a smaller revised right of way area.

A review of the three Detailed Study Alternatives at the Hillsborough Street and Wade Avenue interchange area showed that the One Flyover Alternative and the Slight Detour Alternative could be revised to reduce right of way needs on Meredith College’s main campus to a greater extent than under the Two Flyovers Alternative. This was the area Meredith College indicated was most important to them, so only the One Flyover Alternative and Slight Detour Alternative had revised preliminary designs prepared.

All three original Detailed Study Alternatives have the same design and right of way impacts on the University Club/NC State University property on the westbound side of I-440. Therefore, the design revisions developed for the westbound I-440 side would apply to any of the Detailed Study Alternatives, and revising the Two Flyovers Alternative was not needed to investigate reduced right of way impacts to the University Club.

The preliminary designs for both revised alternatives are shown in **Appendix A, Figures A-1 and A-2**. The design revisions incorporated into the One Flyover Alternative-Revised and the Slight Detour Alternative-Revised are listed below.

- Reduced radii for the loop ramps at Hillsborough Street under both the Slight Detour Alternative-Revised and the One Flyover Alternative-Revised.
- Use of several retaining walls under both One Flyover Alternative-Revised and Slight Detour Alternative-Revised to reduce impacts from the ramps and bring them closer to the I-440 mainline in both directions.
- Reduced angle for the crossing of the eastbound braided ramps in the One Flyover Alternative-Revised.
- Elimination of the ramp from eastbound Wade Avenue to westbound I-440 that peels off from the flyover ramp under both the One Flyover Alternative-Revised and the Slight Detour Alternative-Revised. Under the revised designs, this ramp



traffic now goes to the traffic signal on Wade Avenue and turns right onto a ramp. There is a new traffic signal proposed at the intersection of this ramp and the ramp from westbound I-440 exiting to Hillsborough Street to control the merging actions. This eliminates a braided ramp condition in the westbound direction on University Club property and allows the ramps to move closer to the mainline.

- Use of retaining walls to reduce impacts from the Reedy Creek Greenway relocation on Meredith College's main campus adjacent to the One Flyover Alternative-Revised and the Slight Detour Alternative-Revised.
- Addition of a greenway bridge over Moore Drive north of Wade Avenue that separates Reedy Creek Greenway traffic from Moore Drive vehicular traffic to address Meredith College's security and safety concerns with having an at-grade crossing of the greenway at Moore Drive. This concept applies to both the One Flyover Alternative-Revised and the Slight Detour Alternative-Revised.

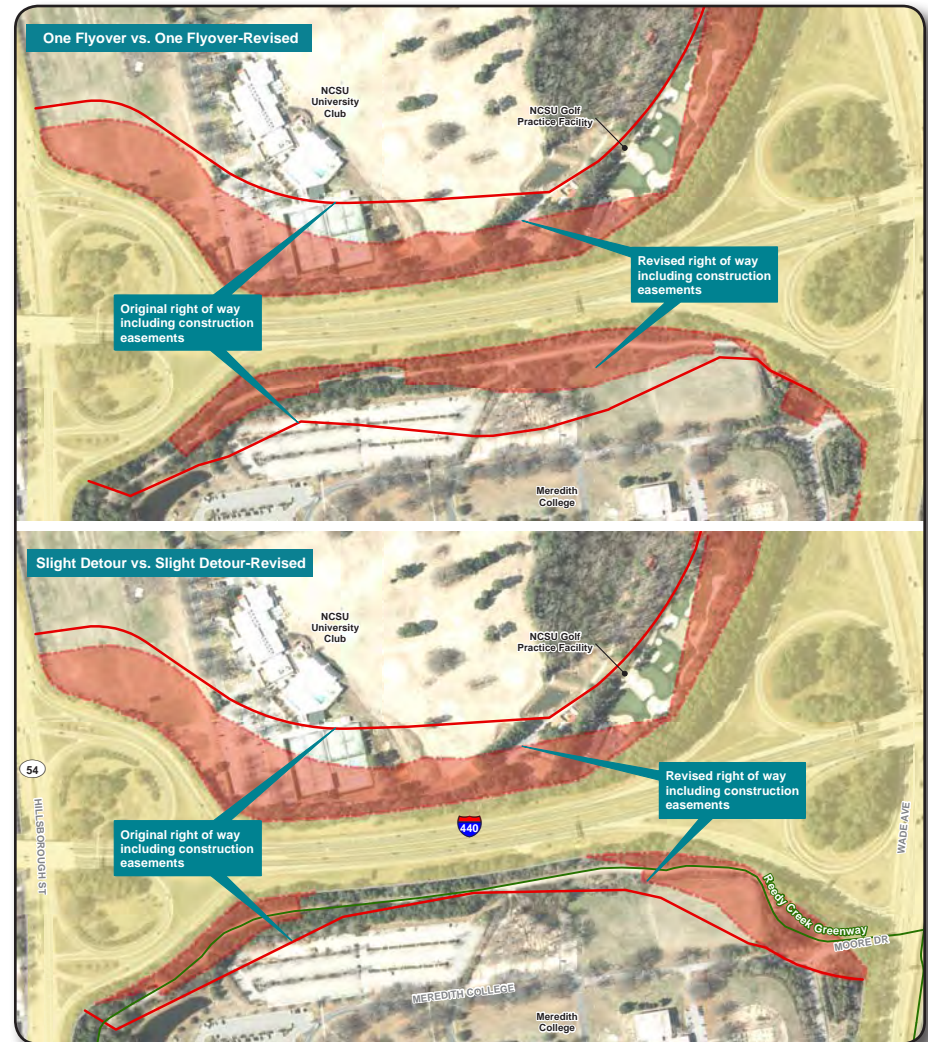
The impacts of the One Flyover Alternative-Revised and the Slight Detour Alternative-Revised are compared in **Table A-1** in **Appendix A**, along with the One Flyover Alternative, Two Flyovers Alternative, and Slight Detour Alternative.

As shown in **Table A-1** and **Exhibit 6**, right of way impacts to University Club/NC State University property would be reduced by almost a third under the revised designs. Under the One Flyover Alternative-Revised, right of way impacts would be approximately 12.7 acres, down from 18.4 acres with the One Flyover Alternative. Under the Slight Detour Alternative-Revised, right of way impacts would be approximately 12.7 acres, down from 18.7 acres under the Slight Detour Alternative.

Right of way impacts to Meredith College main campus would be reduced by over half (**Table A-1** and **Exhibit 6**). Under the One Flyover Alternative-Revised, right of way impacts would be approximately 4.5 acres, down from 10.7 acres with the One Flyover Alternative. Under the Slight Detour Alternative-Revised, right of way impacts would be approximately 4.0 acres, down from 8.2 acres under the Slight Detour Alternative.

Another revision considered to reduce property impacts on Meredith College's main campus was to relocate the Reedy Creek Greenway to the

### Exhibit 6: Right of Way Impacts Comparison- Original vs Revised Designs



Source: ESRI, NCDOT, Wake County, NC Center for Geographic Information & Analysis

north and east sides of the main campus instead of replacing it on the west side. This relocation option, called the Faircloth Street Option, would also require new right of way from Meredith College, but in a different location.

The preliminary design for the Reedy Creek Greenway Faircloth Street Option is shown in **Appendix A, Figure A-3**. The new greenway would begin at the south end of the existing culvert under Wade Avenue. It would then go on a new pedestrian bridge over Moore Drive and extend along the north side of Meredith College's main campus along Wade Avenue to connect to an existing multi-use path that begins at the intersection of Wade Avenue and Ridge Road. The relocated greenway would then follow the existing multi-use path to the Wade Avenue intersection with Faircloth Street. From here, the greenway would be on a new segment under the power easement along Faircloth Street from Wade Avenue to Hillsborough Street.

**Table A-2 in Appendix A** compares the relocation options for the Reedy Creek Greenway on the Meredith College main campus. These include placing it adjacent to the One Flyover Alternative-Revised, adjacent to the Slight Detour Alternative-Revised, or along the Faircloth Street Option. As shown in the table, the Faircloth Street Option would have minor impacts to streams and wetlands, whereas constructing the greenway adjacent to the One Flyover Alternative-Revised or Slight Detour Alternative-Revised would not impact streams and wetlands. The Faircloth Street Option also would be more expensive to construct due to its longer length and an additional pedestrian bridge over Moore Drive to carry the greenway.

The Reedy Creek Greenway would be placed in a permanent easement that would be maintained by the City of Raleigh. The estimated new easement area would be 2.0 acres along the west side of campus if placed adjacent to the One Flyover Alternative-Revised and 0.6 acre if placed adjacent to the Slight Detour Alternative-Revised. For the Faircloth Street Option, approximately 0.8 acre of permanent easement would be needed from the east side of campus, mostly within the existing power easement.

## 5.4 Updated Traffic Operations Analysis

Traffic volumes forecast for the year 2035 with and without the project are documented in Section 2.3 of the EA. The 2035 traffic forecasts with the project in place were used to demonstrate how the project would benefit travel through the corridor, to help size the roadway and interchange ramps so they will operate as efficiently as possible into the future, and to determine the number and length of turn lanes at intersections and other

roadway elements included in the preliminary designs of the Detailed Study Alternatives.

In May 2017 (too late to include in the EA), traffic forecasts were updated to 2040 (AECOM, May 2017) using the latest regional travel demand model developed by CAMPO. These are summarized in **Section 5.4.1**.

The 2040 forecasted traffic volumes were used to update the traffic operations analysis of the Detailed Study Alternatives and check that the preliminary engineering designs would continue operate acceptably with the 2040 traffic volumes. **Section 5.4.2** summarizes the updated traffic operations analysis documented in the *Year 2040 No-Build and Build Traffic Operations Technical Memorandum* (Atkins, March 2018).

### 5.4.1 Traffic Volume Forecasts

The year 2040 traffic volume forecasts with and without the project are compared in **Table 3**.

As explained in Section 2.3.1 of the EA, all proposed Detailed Study Alternatives are forecast to have the same traffic volumes since all propose adding the same number of through lanes (one in each direction) and retaining the same interchanges, with the differences being interchange types. The model and methodology used to create the forecasts are not sensitive to differences in interchange types (just the presence or absence of an interchange or one or more of the accesses provided by the interchange).

As shown in **Table 3**, the forecasted daily traffic volumes for I-440 in 2040 (and also in 2035) are greater with the project constructed since I-440 would be able to carry more traffic with the added through lane in each direction. Overall, traffic volumes along I-440 are forecast to be higher in 2040 than in 2035 under the no-build and build project conditions.

### 5.4.2 Traffic Operations Along the Corridor

The overall ability of the Detailed Study Alternatives to improve capacity and traffic flow along the I-440 corridor in the project area was summarized in Section 2.3.2 of the EA for year 2035 forecasted traffic. The analysis included:

**Table 3: Year 2040 Traffic Volume Forecasts**

I-440	2040 Average Vehicles per Day without Project	2040 Average Vehicles per Day with Project	Percent Difference
<b>Lake Boone Trail (SR 1676)</b>	136,000	151,000	11%
<b>Wade Avenue (SR 1728)</b>	120,100	133,000	11%
<b>Hillsborough Street (NC 54)</b>	111,400	129,300	16%
<b>Western Boulevard (SR 2012)</b>	108,600	125,900	16%
<b>Melbourne Road (SR 1445) (partial interchange)</b>	103,000	119,300	16%
<b>Jones Franklin Road (SR 5039)</b>	101,300	114,900	13%
<b>I-40</b>	179,100	183,700	3%
<b>Crossroads Boulevard (partial interchange)</b>	156,800	160,500	2%
<b>Walnut Street (SR 1313)</b>	156,400	157,900	1%
<b>Cary Parkway</b>			

Source: AECOM, May, 2017  
 Note: Volume includes I-440 mainline and Collector-Distributor (C-D) road if a C-D road exists between interchanges.

- Capacity and level of service through the I-440 corridor during peak periods.
- Average travel speeds through the I-440 corridor during peak periods.
- Number of vehicles processed through the corridor during peak periods using total vehicles miles traveled as the measure (peak period hours x traffic volume x speed x distance along corridor)

This analysis is updated for 2040, as summarized below. The following interchange alternatives were included in the update. Please note that grade separations do not add or take away traffic from the I-440 corridor, so they do not influence operations along I-440, and therefore, they are not listed below.

- I-440 interchange and south – Widen I-440 Only Alternative
- Jones Franklin Road interchange – Upgrade Existing Partial Clover Alternative
- Melbourne Road interchange – Replace Bridge in Place Alternative
- Western Boulevard interchange – Double Crossover Diamond Alternative
- Hillsborough Street and Wade Avenue interchange area – One Flyover Alternative-Revised and Slight Detour Alternative-Revised

Capacity Levels of Service Along Segments of I-440

All Detailed Study Alternatives, including the revised designs, would substantially improve traffic operations along the I-440 corridor in the study area compared to the No-Build Alternative. The alternatives would improve capacity by adding one through lane in each direction and eliminating the bottlenecks on I-440 present at either end of the project corridor.

Table 2.2 in the EA showed a comparison of congestion levels during peak hours with and without the project. Based on the 2040 volumes, this table would show the same trends, with congestion easing under the build alternatives compared to the no-build condition.



### Average travel speeds and vehicles processed along I-440

Year 2040 average travel speeds through the corridor during two-hour morning and evening peak periods with and without the project were compared. The speeds were estimated using a computer model (VISSIM) that simulates travel along the entire corridor from south of Walnut Street to north of Wade Avenue, including both bottleneck areas.

The VISSIM model can be affected by interchange types. Therefore, both the revised alternatives for the Hillsborough Street and Wade Avenue interchange area were modeled for average travel speeds along the corridor. The results were the same.

**Exhibit 7** is a graph showing the substantial increases in 2040 travel speeds that would occur along the corridor with the project.

In the eastbound direction, future average travel speeds under the build alternatives would still be lower than the posted speed limit, but would be approximately 5 percent higher in the morning peak periods and 45 percent higher in the evening peak periods compared to the No-Build Alternative.

The eastbound direction is influenced most by the I-40 interchange area, where there is both a bottleneck and general congestion through the interchange area. The proposed project would eliminate the bottleneck but would not make any other improvements to the I-40 interchange area, where congestion at the interchange would still occur. Separate future I-40 projects are programmed in the STIP that will improve the operation of I-40 and the I-440 interchange area.

In the westbound direction, future average travel speeds under the build alternatives would be a dramatic improvement over the No-Build Alternative and would be approximately 55 mph.

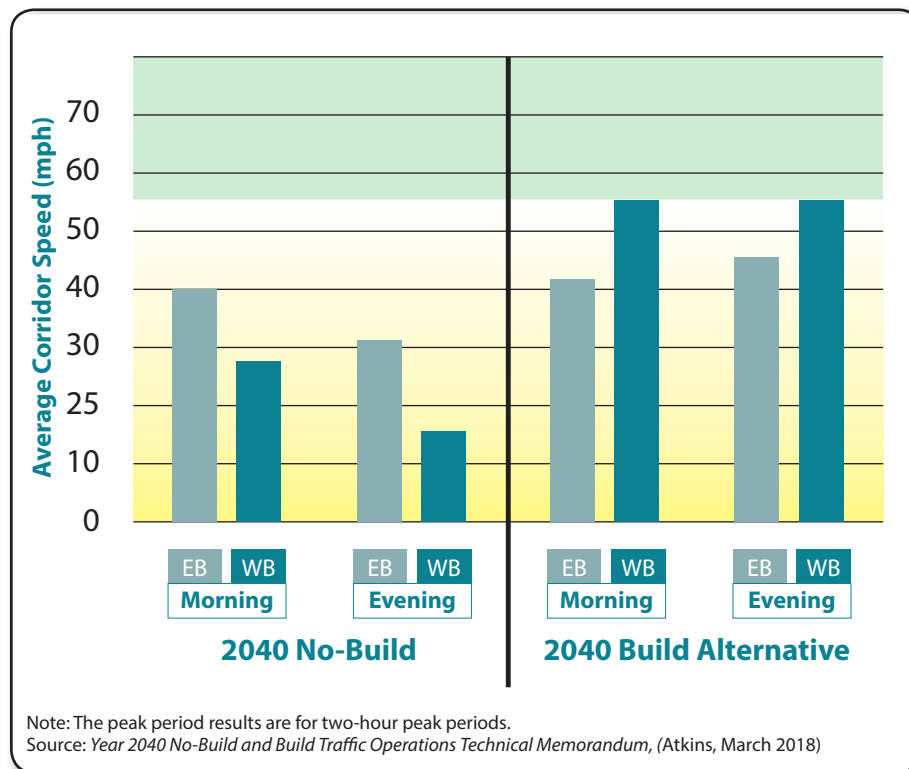
The westbound direction is influenced mostly by the Wade Avenue interchange area, where both the existing bottleneck and general congestion at the interchange slow down traffic. The proposed project would remove the bottleneck and improve the Wade Avenue interchange configuration; both of which contribute to faster average travel speeds in the westbound direction compared to the eastbound direction.

### Vehicles Processed Along I-440

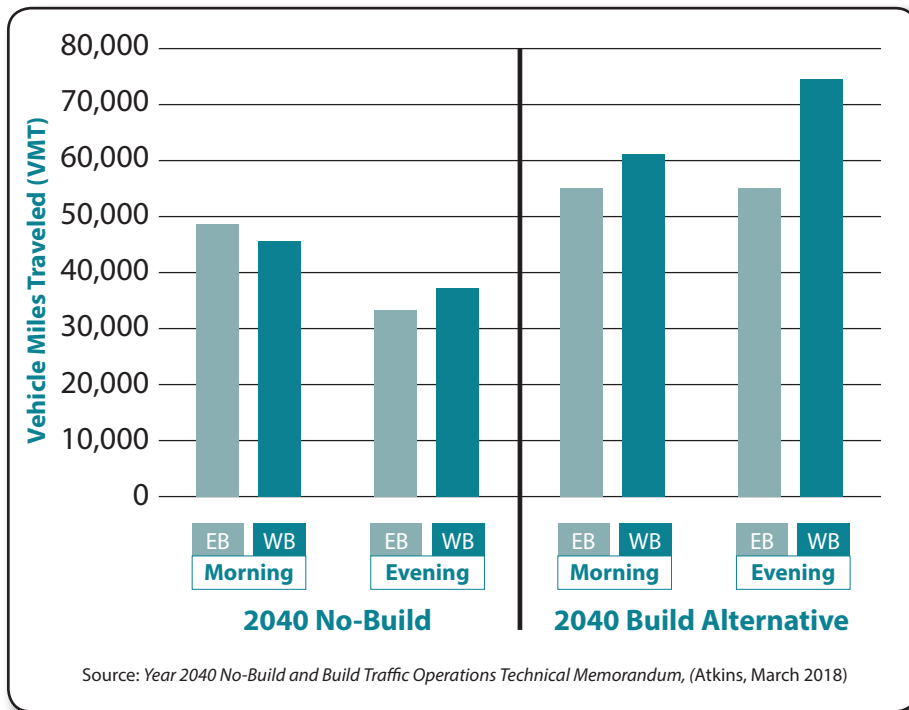
In addition to increasing average speeds along the corridor, building the project also would result in substantially more vehicles being able to get through the corridor during morning and evening two-hour peak periods, as shown in **Exhibit 8**.

In the eastbound direction, the Detailed Study Alternatives can process about 14-16 percent more traffic in the morning two-hour peak period and about 63 percent more traffic in the evening two-hour peak period compared to the No-Build Alternative.

**Exhibit 7: Average Speed on I-440 Through the Project Corridor in 2040 During Two-Hour Peak Periods**



**Exhibit 8: Peak Period Vehicle Miles Traveled on I-440 Through the Project Corridor in 2040**



In the westbound direction, the Detailed Study Alternatives can process about 37 percent more traffic in the morning two-hour peak period and about twice as much traffic in the evening two-hour peak period compared to the No-Build Alternative.

Other operational analyses

The traffic operations analysis also included updates to the evaluation of the signalized and stop-sign controlled intersections at interchange ramps and other adjacent intersections for the year 2040 peak periods under the build and no-build conditions.

As in 2035, in general, the operations of the modeled signalized and stop sign controlled intersections are similar for the revised Detailed Study Alternatives and generally would operate better than under the no-build condition.

# 6 Selected Alternative

CHAPTER

## 6.1 Description of the Selected Alternative

The Detailed Study Alternatives (Revised, as applicable) for the widening of I-440 and the various interchanges and grade separations along the corridor can be combined to form 36 different combinations.

Based on the information available to date, including the EA, updates documented in this FONSI, and comments on the project from agencies, local governments, other organizations, and citizens, the NCDOT identified the end-to-end Selected Alternative listed in Table 4.

The Selected Alternative is shown in Figure 1a-Figure 1j (starting on page 34) and described below, along with a summary of reasons for the selection and descriptions of any proposed minor design changes from the preliminary designs shown on the Public Hearing Maps and in the EA. Because the proposed design changes are minor and are not anticipated to increase impacts, they were left to be incorporated into the final design plans and are not shown on Figure 1a-Figure 1j.

**Table 4: Project U-2719 Selected Alternative**

Location	Selected Detailed Study Alternative
I-40 interchange and south	Widen I-440 Only Alternative
Jones Franklin Road interchange	Upgrade Existing Partial Clover Alternative
Athens Drive grade separation	Replace Bridge in Place Alternative
Melbourne Road interchange	Replace Bridge in Place Alternative
Western Boulevard interchange	Double Crossover Diamond Alternative
Ligon Street grade separation	Build Bridge to North Alternative
Hillsborough Street and Wade Avenue interchange	Slight Detour Alternative-Revised with Reedy Creek Greenway relocated adjacent to I-440



It should be noted that NCDOT is working with the City of Raleigh on a cost-sharing Municipal Agreement for sidewalks and multi-use paths around the interchanges and grade separations. These additional sidewalks and multi-use paths are not anticipated to change the proposed right of way required. The Municipal Agreement also will define the extent of the median planters shown on **Figure 1a-Figure 1j**. All cost-sharing items agreed to by the City of Raleigh will be incorporated into the final design plans.

#### I-40 Interchange and South: Widen I-440 Only

Improvements in this area consist of widening I-440 within existing right of way from four lanes to six lanes, which will eliminate the eastbound bottleneck that occurs just before the Jones Franklin Road interchange (**Figure 1a-Figure 1b**). There would be no impacts extending outside the existing right of way in this area.

#### Jones Franklin Road Interchange: Upgrade Existing Partial Clover Alternative

The Upgrade Existing Partial Clover Alternative is the only Detailed Study Alternative for this interchange (**Figure 1c-Figure 1d**).

Under this alternative, Jones Franklin Road will be widened to four lanes, with Ft Sumter Road also getting realigned across from the interchange ramps. The entrance to the Capital Center Drive office park will be closed due to its proximity to the interchange, and will be relocated to a new Capital Center Drive/Denise Drive extension with a traffic signal at its intersection with Jones Franklin Road. The addition of bicycle lanes and sidewalks also will be implemented in the new design, and the bridge over I-440 would be wide enough to accommodate a future greenway planned by the City of Raleigh.

On balance, the benefits of this alternative described above outweigh the impacts. Impacts from the preliminary design at this location include impacts to streams, wetlands, and ponds, as well as 23 residential relocations and 7 business relocations, including the Learn with the Best private school.

Listed below are minor design changes requested after the EA and minor design changes agreed to in meetings with the City of Raleigh that will be incorporated into the final design of the Jones Franklin Road interchange.

- All lanes on Jones Franklin Road will be 11 feet wide instead of the 12-foot width shown on the preliminary design plans.
- All sidewalks along Jones Franklin Road will be 6 feet wide.
- A 5-foot wide sidewalk will be included along the south side of Capital Center Drive/Denise Drive extension to connect to the existing sidewalk on Capital Center Drive.
- All median areas greater than 8 feet wide (excluding curb) will be specified as grassed/plantable medians.
- Any medians needed along Jones Franklin Road north of Barringer Drive will be painted medians rather than raised medians. This was requested in several public comments from residents of the area.
- On the bridge, a barrier is not needed to separate the greenway from the roadway. Bridge rails can be standard 2-bar rails on the greenway side and standard 3-bar rails on the sidewalk side.
- The monolithic island shown on the Capital Center Drive/Denise Drive extension at the Jones Franklin Road intersection will be removed from the design plans.
- The Capital Center Drive/Denise Drive extension will be renamed Capital Center Drive once completed.
- Final design plans will show Vick Charles Drive connected to the Capital Center Drive/Denise Drive extension as a public street.

#### Athens Drive Grade Separation: Replace Bridge in Place Alternative

The Replace Bridge in Place Alternative consists of replacing the existing bridge on Athens Drive over I-440 on its existing alignment, as well as the construction of sidewalks and bicycle lanes on Athens Drive (**Figure 1e**). Athens Drive will remain a two-lane roadway after completion of the replacement of the bridge. The bridge will be closed for approximately 9-12 months and will require an off-site detour. This bridge will not be closed at the same time as the Melbourne Road bridge.

The Replace Bridge in Place Alternative for the Athens Drive grade separation is preferred by the City of Raleigh. The Replace Bridge in Place Alternative will require no residential relocations, whereas the Replace Bridge to North alternative would require five residential relocations.

Listed below is a minor design change requested after the EA by the City of Raleigh that will be incorporated into the final design of the Athens Drive grade separation.

- Pavement width for bicycle lanes will be provided but the bicycle lanes will not be striped with this project.

#### Melbourne Road Interchange: Replace Bridge in Place Alternative

The Replace Bridge in Place Alternative includes the replacement of the existing Melbourne Road bridge over I-440 on its existing alignment (**Figure 1e**). Sidewalks would be constructed on both sides of the bridge and then along the south side of the bridge approaches. The roadway width will accommodate bicycle lanes. The bridge will be closed for approximately 9-12 months and will require an off-site detour. This bridge will not be closed at the same time as the Athens Drive bridge.

In a comparison of the two alternatives for the Melbourne Road interchange, the Replace Bridge in Place Alternative has fewer residential relocations (3 vs 6). This alternative also is preferred by the City of Raleigh.

Listed below are minor design changes requested after the EA and minor design changes agreed to in meetings with the City of Raleigh that will be incorporated into the final design of the Melbourne Road interchange.

- The proposed bridge typical section will be reduced to two lanes instead of the three lanes originally proposed to accommodate a left turn lane. The City of Raleigh requested this change in response to feedback from the public.
- The pavement across the bridge will be wide enough to accommodate bicycle lanes, but the bicycle lanes will not be striped at this time.

#### Western Boulevard Interchange: Double Crossover Diamond Alternative

The Double Crossover Diamond Alternative is the only Detailed Study Alternative for the Western Boulevard interchange (**Figure 1f**). This alternative is a complete redesign of the interchange, and it removes the existing flyover ramp from westbound Western Boulevard to westbound I-440 that merges onto I-440 on the left side, which is an undesirable configuration. There will be three through lanes in each direction of Western Boulevard through the interchange area. This alternative also will

replace the multi-use path that is currently along the westbound side of Western Boulevard. Sidewalks will be installed on the opposite side.

On balance, the benefits of this alternative described above outweigh the impacts.

Impacts from the Double Crossover Diamond Alternative include one residential relocation, impacts to streams, and right of way acquisition of a portion of the K-mart parking lot. This alternative has a high estimated construction cost due to challenges associated with installing adequate drainage structures through the interchange area. These challenges would apply to any design. Some of the existing drainage structures are deep (40+ feet) underground and tunneling methods may be needed.

Listed below are minor design changes requested after the EA and minor design changes agreed to in meetings with the City of Raleigh that will be incorporated into the final design of the Western Boulevard interchange.

- The City of Raleigh prefers that the replacement multi-use path start on the south side of Western Boulevard at Blue Ridge Road, then extend eastward, through the center of the interchange, then switch to the north side of Western Boulevard east of I-440. The sidewalk would then be a mirror image of the multi-use path. Both the sidewalk and multi-use path would share the area through the center of the interchange. **Figure 1f** shows the multi-use path along the north side of Western Boulevard, similar to where it is today.
- Minimum curve radii for the free-flow movements in the interchange that meet required design standards will be incorporated into the final design.

#### Ligon Street Grade Separation: Build Bridge to North Alternative

The Build Bridge to North Alternative for the Ligon Street grade separation will construct a two-lane bridge for Ligon Street over I-440 to replace the existing traffic culvert (**Figure 1g**). The newly constructed bridge will also include sidewalks, and Ligon Street will have a posted speed limit of 25 miles per hour.

Compared to the other alternatives, the Build Bridge to North Alternative for the Ligon Street grade separation provides the most benefits as

compared to the impacts, even though it will have the most impacts to residences. The Build Bridge to North Alternative will impact 10 townhomes in the Method Townes development, whereas the other two alternatives would not impact any residences. It is estimated there is adequate replacement housing in the area.

The Build Bridge to South Alternative has the most impacts to streams and an Adverse Effect on the Oak Grove Cemetery historic property, as well as impacting a NCSU research facility that would be difficult and expensive to replace. The two bridge options have similar costs, but the Build Bridge to North Alternative is a better bridge option compared to the Build Bridge to South Alternative in terms of impacts.

In comparing the Build Bridge to North Alternative with the Extend Existing Traffic Culvert Alternative, the bridge will enhance connections between the Oak Grove Cemetery and the Method community since pedestrians and vehicles (including buses) will be accommodated on the bridge, while the Extend Existing Traffic Culvert Alternative will not provide these features. The bridge also will receive enhanced aesthetic treatments as a condition of the No Adverse Effect determination from NC HPO. The aesthetic treatments will be selected with input from the Method community.

Impacts to streams from the Build Bridge to North Alternative and the Extend Existing Traffic Culvert Alternative are similar, although impacts from the bridge alternative are slightly higher (175 linear feet versus 125 linear feet).

During the public comment period, only a few comment forms/emails/letters were received with comments about the Ligon Street grade separation. These were evenly split regarding preferences between the three alternatives. On-line forum comments expressed more support for the culvert alternative, although it was evenly split if the preferences for the two bridge alternatives were added together and compared to the culvert alternative.

NCDOT met with Method community leaders on October 19, 2017, who expressed support for the Build Bridge to North Alternative. With their assistance, a community-wide meeting was advertised and held on November 14, 2017, to discuss the alternatives for the Ligon Street grade separation. Approximately 39 people attended the November meeting.

Overall, the attendees were supportive of the Build Bridge to North Alternative.

Both NCSU and the City of Raleigh support a bridge alternative, as it will improve bus, pedestrian, and bicycle access across I-440. The City of Raleigh has future plans to extend Ligon Street to Blue Ridge Road.

Listed below are minor design changes requested after the EA and minor design changes agreed to in meetings with the City of Raleigh that will be incorporated into the final design of the Ligon Street grade separation.

- The design speed/proposed posted speed limit will be changed from 40 mph/35 mph to 30 mph/25 mph.
- Due to the low speed limit, Ligon Street does not need a centerline stripe.

*Hillsborough Street and Wade Avenue interchange area: Slight Detour Alternative-Revised with Reedy Creek Greenway adjacent to I-440*

The Slight Detour Alternative-Revised is shown on **Figure 1h-Figure 1j**. This alternative includes interchanges at Hillsborough Street and Wade Avenue and the addition of a right-turn lane for the westbound off ramp at the Lake Boone Trail interchange. The Hillsborough Street interchange would remain a half clover. Traffic from Hillsborough Street wanting to get to westbound I-440 would have to “slightly detour” through a traffic signal at Wade Avenue, joining the Wade Avenue on-ramp to eastbound I-440. The Wade Avenue interchange would include a flyover ramp to replace the loop ramp that connects eastbound Wade Avenue and eastbound I-440. The loop off-ramp in the northeast quadrant of I-440 and Wade Avenue is reinstated for eastbound I-440 traffic exiting to westbound Wade Avenue, and in the westbound I-440 direction, this design removes weaving with the mainline lanes.

The Slight Detour Alternative-Revised was modified from the Slight Detour Alternative to reduce right of way impacts to Meredith College and University Club/NCSU properties. The Slight Detour Alternative-Revised and the One Flyover Alternative-Revised have less right of way impacts compared to the Two Flyovers Alternative and the original Slight Detour Alternative and One Flyover Alternative.

On the NCSU/University Club property, the Slight Detour Alternative-Revised and the One Flyover Alternative-Revised have the same design

and the same impacts, approximately 12.7 acres. Both impact portions of the University Club parking lot, tennis courts, and golf course, as well as the NCSU golf practice facility. However, the reduced right of way needs with the revised alternatives reduces the amount of these facilities impacted and provides greater flexibility in options to replace these facilities.

On Meredith College property, the Slight Detour Alternative-Revised has less right of way impacts than the One Flyover Alternative-Revised. Both revised designs avoid the commuter parking lot and impacts to an athletic field are reduced. Meredith College has stated they prefer the Slight Detour Alternative-Revised as it would have the least impact to usable land for existing and future uses on their constrained campus.

The Slight Detour Alternative-Revised has the same permanent right of way impact to Museum Park (approximately 0-.9 acres) as the Slight Detour Alternative, One Flyover Alternative, and One Flyover Alternative-Revised. The Two Flyovers Alternative would have additional impacts to Museum Park at the House Creek culvert under Wade Avenue for a culvert extension (0.3 acres) and a permanent drainage easement (0.2 acres).

Regarding wetlands and streams, the Slight Detour Alternative-Revised has similar impacts compared to the Slight Detour Alternative, One Flyover Alternative, and One Flyover Alternative-Revised, and these are slightly greater overall than impacts from the Two Flyovers Alternative. However, the wetland impacts from the Slight Detour Alternative-Revised are small (less than one tenth of an acre). For streams, the Slight Detour Alternative-Revised has approximately 342 more linear feet of intermittent stream impacts compared to the Two Flyovers Alternative, but 84 less linear feet of perennial stream impacts.

Replacing the Reedy Creek Greenway on the main campus of Meredith College adjacent to I-440, similar to where it is today, was selected. The City of Raleigh, who has jurisdiction over the greenway, has stated they prefer the option adjacent to I-440 and that this option will not adversely impact the activities, features, or attributes of the greenway. The greenway adjacent to I-440 under the Slight Detour Alternative-Revised will require a small amount of additional land for a permanent easement from the athletic field, but still avoids impacting the commuter parking lot (See

Figure 1h). Replacing the Reedy Creek Greenway adjacent to the Slight Detour Alternative-Revised requires the least amount of right of way and has slightly less impacts to wetlands and streams compared to relocating the greenway to Faircloth Street.

Listed below are minor design changes requested after the EA and minor design changes agreed to in meetings with the City of Raleigh that will be incorporated into the final design of the Hillsborough Street and Wade Avenue interchanges.

- Extend the left-turn lane from Wade Avenue to Ridge Road as much as possible.
- Add a third lane in the median in the eastbound direction of Wade Avenue beginning at the off-ramp to Blue Ridge Road and ending at the proposed new traffic signal for the I-440 westbound on ramp.
- Shorten the length for potential median planters to end just west of the I-440 bridge over Western Boulevard instead of ending just west of the Ligon Street bridge.

## 6.2 Updated Costs

The estimated costs for the Slight Detour Alternative-Revised were updated to include construction costs for the revised preliminary design and to include the most recent unit costs available for the various construction elements. Right-of-way cost estimates were updated based on the reduced right-of-way needs in the Hillsborough Street and Wade Avenue interchange area. Utility cost estimates did not change.

FHWA, in coordination with NCDOT, used the updated cost estimates and conducted a cost estimate review for the project that was completed in April 2018. The cost estimate review process provides an unbiased risk-based review to verify the accuracy and reasonableness of the current total cost estimate and to develop a probability range for the cost estimate. As a result of the cost estimate review process, the total cost of the U-2719 project, including construction, right-of-way acquisition, and utilities, is estimated to be \$468.1 million in Year of Expenditure (YOE) dollars. Costs estimated in YOE dollars account for inflation over the course of a project's construction period since the entire cost of a project will not be spent in



the year that construction activities begin. The estimated \$468.1 million represents a 70 percent confidence level, which means there is a 70 percent probability the cost will be less than or equal to this cost.

### 6.3 Impacts of the Selected Alternative

The project is not anticipated to have significant adverse community, economic, or other environmental impacts. **Table 5** provides a summary of the estimated direct and indirect impacts to the human, physical, cultural, and natural environments from the Selected Alternative. This table has been updated since the EA to reflect any additional analysis and changes to the design that have been made to minimize impacts, as reported in this FONSI. Avoidance and minimization measures, along with proposed mitigation, are identified to lessen or avoid impacts associated with the Selected Alternative.

#### Effects determinations for Section 4(f) resources

As described in Section 3.4 of the EA, public parks and recreation areas (greenways) are afforded special protections under a law known as Section 4(f). As stated in Section 3.4.3 of the EA, FHWA anticipated that a *de minimis* finding could be made for each Section 4(f) resource directly impacted by the project. A *de minimis* finding regarding impacts on publicly-owned parks and recreation areas can be made if a project would not adversely affect the activities, features, and attributes of the Section 4(f) resource.

The Slight Detour Alternative-Revised would directly impact parks and greenways under the jurisdiction of the City of Raleigh and a park under the jurisdiction of the NC Museum of Art. FHWA has made a finding of *de minimis* impact from the Selected Alternative for Lake Johnson Park, Kaplan Park, Reedy Creek Greenway and Museum Park.

The City of Raleigh has determined that the preliminary design of the Selected Alternative would not adversely affect the activities, features, and attributes of Lake Johnson Park, Kaplan Park, and Reedy Creek Greenway. A letter from the City of Raleigh stating this determination and concurring with FHWA's finding of *de minimis* effect is included in **Appendix B.3**.

The NC Museum of Art (NCMA) has determined that the preliminary design of the Selected Alternative would not adversely affect the activities, features, and attributes of Museum Park. A letter from the NCMA stating this determination and concurring with FHWA's finding of *de minimis* effect is included in **Appendix B.3**.

In order to achieve concurrence on the *de minimis* finding from the NCMA, NCDOT agreed to develop a Memorandum of Agreement with NCMA regarding additional mitigation measures. NCDOT will contribute funds to NCMA's stream restoration projects for stream segments on Museum Park property in an amount that will vary with the actual acreage impacted.

#### Effects determination for historic portion of Meredith College

The Selected Alternative (Slight Detour Alternative-Revised) lessens the right of way impacts to Meredith College campus and will not directly encroach on the historic portion of the college. Under Section 106 of the Historic Preservation Act, the effect determination is "No Adverse Effect" for this resource. As a condition of the effects determination, NCDOT must, in consultation with Meredith College, develop a landscaping plan for the western edge of campus where it abuts new right of way needed for the proposed project. The effects determination form is included in **Appendix B.2**.



**Table 5: Impacts and Proposed Mitigation for the Selected Alternative**

Resource	Impacts	Proposed Mitigation
<b>Social Resources – Section 3.1 and Section 3.2 of the EA</b>		
Relocations and Property Acquisition (EA Section 3.1.2)	Residential relocations – 38 Business Relocations – 15	Impacts will continue to be minimized to the extent feasible during final design.  As described on page 3-4 of the EA, NCDOT will use three programs to minimize the inconvenience of relocation: Relocation Assistance, Relocation Moving Payments, and Relocation Replacement Housing Payments or Rent Supplement. These programs are in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Comparable replacement housing and business space is available in the project area for displaced homeowners, tenants, and businesses.
Community Resources (EA Section 3.1.3)	Minor impact to public parks: <ul style="list-style-type: none"> <li>• Lake Johnson</li> <li>• Kaplan Park</li> <li>• Museum Park</li> </ul> Greenways <ul style="list-style-type: none"> <li>• Future Walnut Creek Greenway accommodated on Jones Franklin Road</li> <li>• Western Boulevard multi-use path replaced</li> <li>• Reedy Creek Greenway replaced</li> </ul> Other <ul style="list-style-type: none"> <li>• Learn with the Best Private School displaced</li> <li>• Minor Impact to K-Mart parking lot</li> <li>• University Club – partial impact to parking, tennis courts, and golf course</li> <li>• NCSU Golf practice facility - partial impact</li> <li>• Meredith College athletic field - partial impact</li> </ul>	See mitigation described above for relocations and property acquisition and mitigation described below regarding Section 4(f) resources..
Environmental Justice (EA Section 3.1.5)	Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No disparate impacts to minority or low-income populations are anticipated under Title VI of the Civil Rights Act and related statutes.	Not applicable.

**Table 5: Impacts and Proposed Mitigation for the Selected Alternative**

Resource	Impacts	Proposed Mitigation
<p>Visual Resources (EA Section 3.2)</p>	<p>Along most of the corridor, views would not change substantially since the viewshed already includes an interstate highway.</p> <p>Views in the vicinity of the Ligon Street Build Bridge to North Alternative will change with the introduction of a new bridge.</p> <p>Views would change for some areas at the University Club and at Meredith College. At the University Club there would be new views of retaining walls. At Meredith College, views on the western side of campus would change to include new fill slopes, retaining walls, and a flyover ramp in the northwest corner of campus.</p>	<p>Over time, vegetation removed to construct the project will regrow and obscure views of the highway.</p> <p>The Ligon Street bridge will be enhanced with upgraded railings or other aesthetic treatments due to its proximity to historic Oak Grove Cemetery as a condition of the “No Adverse Effect” determination for this site under Section 106 of the Historic Preservation Act.</p> <p>At the University Club and Meredith College, vegetation will regrow to obscure views of the highway. In addition, at Meredith College, a landscape plan will be implemented on the west side of campus as a condition of the “No Adverse Effect” determination for the historic portion of the college under Section 106 of the Historic Preservation Act. This also will help minimize visual impacts from the project.</p>
<b>ARCHAEOLOGICAL AND HISTORIC ARCHITECTURAL RESOURCES – Section 3.3 of the EA</b>		
<p>Effects on Historic Architectural Sites</p>	<p>There are 5 resources on or eligible for listing on the National Register of Historic Places in the study area.</p> <p>“No Effect”</p> <ul style="list-style-type: none"> <li>• Royal Baking Co</li> <li>• Capital City Lumber</li> </ul> <p>“No Adverse Effect”</p> <ul style="list-style-type: none"> <li>• Oak Grove Cemetery</li> <li>• Berry O’Kelly School Historic District</li> <li>• Meredith College</li> </ul>	<p>During final design, designs will be reviewed to ensure the following applicable conditions are met to maintain the No Adverse Effect determinations:</p> <ul style="list-style-type: none"> <li>• Oak Grove Cemetery - NCDOT will avoid direct encroachment onto the cemetery. A retaining wall is proposed between the Oak Grove Cemetery and the I-440 mainline to avoid direct encroachment. NCDOT will coordinate with the Method community and City of Raleigh regarding aesthetic treatments of the bridge.</li> <li>• Berry O’Kelly School Historic District - NCDOT will coordinate with the Method community and City of Raleigh regarding aesthetic treatments and/or a public art project for the community side of the noise wall recommended in this area.</li> <li>• Meredith College – NCDOT will coordinate with Meredith College on a landscape plan for the western edge of campus where it would abut new right of way.</li> </ul>
<b>RESOURCES PROTECTED UNDER SECTION 4(F) AND SECTION 6(F)(3) LAWS – Section 3.4 of the EA</b>		
<p>Section 4(f) Resources</p>	<p>The project would not adversely impact the activities, features or attributes of the public parks and greenways in the project area.</p> <ul style="list-style-type: none"> <li>• Lake Johnson Park</li> <li>• Kaplan Park</li> <li>• Method Community Park (no encroachment)</li> <li>• Museum Park</li> <li>• Reedy Creek Greenway</li> </ul>	<p>FHWA has determined the project would have a <i>de minimis</i> impact on Lake Johnson Park, Kaplan Park, Reedy Creek Greenway and Museum Park.</p> <p>Written concurrence on the <i>de minimis</i> findings from the officials with jurisdiction over the resources was obtained, and letters from the City of Raleigh and NC Museum of Art (NCMA) are included in <b>Appendix B.3</b>.</p> <p>NCMA, FHWA, and NCDOT are developing a Memorandum of Agreement to define additional mitigation measures to avoid adverse impacts to the activities, features, and attributes of Museum Park.</p>
<p>Section 6(f)(3) Resources</p>	<p>Portions of Lake Johnson Park are protected under Section 6(f)(3) of the Land and Water Conservation Fund Act, however, these areas are avoided through use of a proposed retaining wall and no further actions under Section 6(f)(3) are required.</p>	<p>Not applicable.</p>

**Table 5: Impacts and Proposed Mitigation for the Selected Alternative**

Resource	Impacts	Proposed Mitigation
<b>PHYSICAL RESOURCES – Sections 3.5, 3.6, 3.7, and 3.8 of the EA</b>		
Traffic Noise (EA Section 3.5)	Traffic noise impacts are predicted to occur at 502 receptors along the project corridor.	<p>Ten noise barriers are recommended as preliminarily feasible and reasonable for the Selected Alternative to reduce traffic noise to adjacent residences. Approximately 368 impacted receptors and an additional 141 receptors (for a total of 509 receptors) would benefit from these ten noise barriers. Once final designs are completed, the design-build team will complete additional noise studies to make a final decision about where noise walls would be constructed. The determination of whether a noise wall is feasible and reasonable may change as a result of these additional noise studies, changes in the project, design, or the public involvement process.</p> <p>Existing noise walls along I-440 are brick. The new noise walls will be concrete panels that will be stamped with a brick pattern. NCDOT will work with the City of Raleigh on details regarding the pattern and color of noise walls.</p>
Construction Noise (EA Sections 3.5.5 and 3.5.6)	Construction activities associated with the project will generate noise at adjacent noise sensitive receptors along the length of the project. Construction will include sporadic occurrence of extremely loud activities such as pile driving and jack hammering.	Generally, low-cost and easily implemented construction noise control measures will be incorporated into the project plans and specifications to the extent possible. Potential measures to control construction noise are listed in Section 3.5.6 of the EA.
Air Quality (EA Section 3.6)	<p>No significant impacts related to criteria air quality pollutants or mobile source air toxics are anticipated with the project.</p> <p>During construction, dust generation and burning of materials may occur.</p>	<p>Any burning will be done in accordance with applicable local and state laws and ordinances. Care will be taken to ensure burning will be done at the greatest distance practical from dwellings and not when weather conditions would create a hazard to the public. Burning, if necessary, would be performed under constant monitoring.</p> <p>Measures will be taken during construction to reduce generated by construction activities when control of dust is necessary for the protection and comfort of motorists and area residents.</p>
Utility Relocation/ Replacement (EA Section 3.7)	<p>Utilities are present in the project study area and construction of the project would impact the following:</p> <ul style="list-style-type: none"> <li>• Electric</li> <li>• Telephone</li> <li>• Cable television</li> <li>• Gas</li> <li>• Water</li> <li>• Sewer</li> </ul>	NCDOT will coordinate with all utility providers during final design and construction to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers. Where impacts cannot be avoided, NCDOT will coordinate with utility owners and operators to identify construction requirements and financial responsibility for relocations based upon easements, license agreements, ownership, or other existing agreements covering the use of affected utilities.
Hazardous Materials/ Waste Sites (EA Section 3.8)	One site on Brickhaven Drive with low risk to project cost and schedule is within the proposed right of way for the project.	The NCDOT Geoenvironmental Unit will complete further assessments on properties as necessary, prior to right of way acquisition.

**Table 5: Impacts and Proposed Mitigation for the Selected Alternative**

Resource	Impacts	Proposed Mitigation
<b>FLOODPLAINS, FLOODWAYS, HYDROLOGY – Section 3.9 of the EA</b>		
Floodplains and Floodways Crossings	The project would affect two crossings with defined floodplains/floodways – Walnut Creek at Jones Franklin Road interchange and House Creek at I-440 east of Wade Avenue.	<p>At the Walnut Creek crossing, the proposed project cannot cause adverse impacts to the Base Flood Elevations in this area because of the existing apartment complex structures located just upstream in the floodway. Based upon the preliminary design, this is expected to be achievable. Additional coordination with the Federal Emergency Management Agency (FEMA)/NC Floodplain Mapping Program will be required at this location during final design.</p> <p>Where House Creek crosses under I-440 east of Wade Avenue, coordination with FEMA/NC Floodplain Mapping Program will be required. In this location, if the Base Flood Elevations are predicted to change as a result of the proposed project, an MOA would be required to be approved by FEMA/NC Floodplain Mapping Program before project construction begins.</p> <p>Currently NCDOT and the NC Floodplain Mapping Program have a Memorandum of Agreement (MOA, dated 8/12/16) to streamline review of projects in defined floodplain/floodway areas.</p>
# of Major Culverts/ Pipes (>72" diameter)	There are seven major culverts proposed to be extended or modified and one new major culvert.	Permanent drainage easements are proposed for maintenance purposes at each inlet and outlet where new major culverts or culvert extension are proposed.
Dams	The City of Raleigh is working on a separate project to move the White Oak Lake Dam outside the existing and proposed right of way of I-440.	NCDOT will continue to coordinate with the City of Raleigh regarding the dam relocation project.
<b>WATER RESOURCES AND WATER QUALITY – Section 3.10 of the EA</b>		
Stormwater Runoff	Short-term impacts to water quality may be caused by soil erosion and sedimentation during construction. Long-term impacts can occur as pollutants from highway stormwater runoff flow into adjacent streams.	<p>An erosion and sedimentation control plan will be developed during final design to minimize siltation and erosion during construction. This plan will follow Design Standards in Sensitive Watersheds and Neuse River Riparian Buffer Rules.</p> <p>A Stormwater Management Plan will be prepared during final design of the project to direct the drainage design and manage long-term stormwater runoff. NCDOT will implement new structural best management practices and non-structural pollution minimization measures.</p>
Neuse River Riparian Buffer Rules	<p>Zone 1 Impacts</p> <ul style="list-style-type: none"> <li>• 294,791 sq ft</li> </ul> <p>Zone 2 Impacts</p> <ul style="list-style-type: none"> <li>• 171,170 sq ft</li> </ul>	Prior to construction, NCDOT will obtain written authorization from the NC Department of Environmental Quality (NC DEQ) Division of Water Resources for disturbance of riparian buffer areas. Best Management Practices must be used to minimize disturbance, preserve aquatic life and habitat, and protect water quality. Mitigation may include payment of a fee to the Riparian Buffer Restoration Fund, donation of property, or restoration or enhancement of a riparian buffer area, or other mitigation as approved by the NC DEQ Division of Water Resources.

**Table 5: Impacts and Proposed Mitigation for the Selected Alternative**

Resource	Impacts	Proposed Mitigation
<b>STREAMS, LAKES/PONDS, AND WETLANDS – Section 3.11 of the EA</b>		
Lakes/Ponds (permanent and temporary)	0.96 acres	A Section 404 permit from the US Army Corps of Engineers (USACE) and a Section 401 Water Quality Certification permit from NC DEQ Division of Water Resources will be required for impacts to streams, lakes/ponds, and wetlands. The USACE will make the final determination of Section 404 permit type based on the type of activity, the extent of the impacts, and the impacts by individual crossing.  The permit process includes demonstrating that all practicable measures to avoid and minimize impacts to streams, lakes/ponds, and wetlands have been incorporated into the final design plans before addressing compensation for remaining impacts.
Wetlands (permanent and temporary)	0.16 acres	
Intermittent Streams	Permanent impacts – 845 linear ft Temporary impacts – 190 linear ft	
Perennial Streams	Permanent impacts – 1,451 linear ft Temporary impacts – 712 linear ft	
<b>PROTECTED PLANT AND ANIMAL SPECIES – Section 3.12 of the EA</b>		
Protected Species	<p>“No Effect”</p> <ul style="list-style-type: none"> <li>• Michaux’s sumac</li> <li>• Dwarf wedgemussel</li> <li>• Red-cockaded woodpecker</li> <li>• Cape Fear shiner</li> <li>• Tar River spiny mussel</li> <li>• Yellow lance</li> </ul> <p>“May Effect/Likely to Adversely Effect”</p> <ul style="list-style-type: none"> <li>• Northern long-eared bat</li> </ul> <p>“No Impact”</p> <ul style="list-style-type: none"> <li>• Bald Eagle</li> </ul>	<p>No mitigation is required related to Michaux’s sumac, dwarf wedgemussel, red-cockaded woodpecker, Cape Fear shiner, Tar River spiny mussel, yellow lance, and bald eagle.</p> <p>The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with FHWA, USACE, and NCDOT for the northern long-eared bat in eastern North Carolina (which includes Wake County). The PBO went into effect in 2016 and covers all NCDOT projects and activities in NCDOT Divisions 1 to 8. The PBO requires that upon completion of clearing activities for each project with federal funds (which includes Project U-2719), NCDOT will report on the estimated acres of clearing to the US Fish and Wildlife Service.</p>



## 7 CHAPTER

# Basis for Finding of No Significant Impact

Based upon a detailed study of the proposed project as documented in the EA, updates in this FONSI, and upon review of comments received from the public and federal, state, and local agencies, it is the finding of NCDOT and FHWA that this project will not have a significant impact upon the human or natural environment following implementation of identified mitigation measures. The project is not controversial from an environmental standpoint. No significant impacts to natural, ecological, cultural, or scenic resources are anticipated.

In addition, NCDOT will continue to coordinate with local jurisdictions and stakeholders regarding final design and construction of the project and will continue to look for ways to reduce impacts where feasible through final design.

In view of this evaluation, it has been determined a Finding of No Significant Impact (FONSI) is applicable for this project. Therefore, neither an Environmental Impact Statement (EIS) nor further environmental analysis under the National Environmental Policy Act (NEPA) is required.

## 8 CHAPTER

# Supporting Project Documentation

Supporting documentation used in the preparation of the EA is listed at the end of each chapter of the EA.

Below is a list of supporting documentation prepared after the publication of the EA that aided in preparing this FONSI. These are appended by reference to this FONSI. Copies of these documents are available upon request through the contact information provided in the **Note to Reader** section of this FONSI.

### Public Involvement

#### ***I-440 Improvement Project Public Hearing Summary,*** (January 2018, Atkins)

This report summarizes the advertisement, displays, presentations, and attendance at the project's Public Hearing held August 8, 2017.

#### ***Post-Hearing Review Meeting Summary*** (October 31, 2017, Atkins)

This meeting was held to discuss the comments received during the project's public review period, to draft responses, and to identify recommended alternatives.

### Traffic Information

#### ***Project U-2719 2012/2040 Traffic Forecast*** (May 2017, AECOM)

This memorandum includes the build and no-build traffic forecasts for the project corridor for the years 2012 and 2040.

#### ***Year 2040 No-Build and Build Traffic Operations Technical Memorandum*** (Atkins, March 2018)

This report documents the modeling of future traffic operations for the year 2040 under the No-Build condition and build scenarios that include One Flyover Alternative Revised and Slight Detour Alternative Revised.

### ***Interchange Access Request for I-440 Improvements***

(Atkins, April 2018)

This report documents how the proposed interchange access modifications for the Selected Alternative address the two policy points listed in the FHWA's May 22, 2017 Policy on Access to the Interstate System.

### **Cultural Resources**

#### ***Ground Penetrating Radar Survey of Oak Grove Cemetery***

(November 21, 2016, New South Associates, Inc.)

This report documents the ground-penetrating radar (GPR) survey of Oak Grove Cemetery in Raleigh, NC.

### **Natural Resources**

#### ***Memorandum - U-2719 – I-440 Corridor Protected Species 2017 Re-Survey***

(July 10, 2017, Atkins)

This memo updates surveys along the I-440 corridor for Michaux's sumac and the bald eagle.

#### ***Methodology and calculations for impacts from the U-2719 Preliminary Designs to jurisdictional streams, ponds, wetlands, and riparian buffers, including updates since the publication of the Environmental Assessment***

(March 7, 2018 [original memo dated April 13, 2017], Atkins)

This report documents the calculation methodologies and impacts at each individual stream, pond, and wetland and riparian buffer and provides combined totals for the Detailed Study Alternatives as well as updates since the publication of the EA.

#### ***I-440 Improvements Project NRTR Addendum***

(March 26, 2018, Atkins)

The project study area was expanded on Meredith College property in the vicinity of Moore Drive, and this report documents the surveys for streams, wetlands, ponds, and protected species in this area.

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Figure 1: Selected Alternative Preliminary Design Mapbook

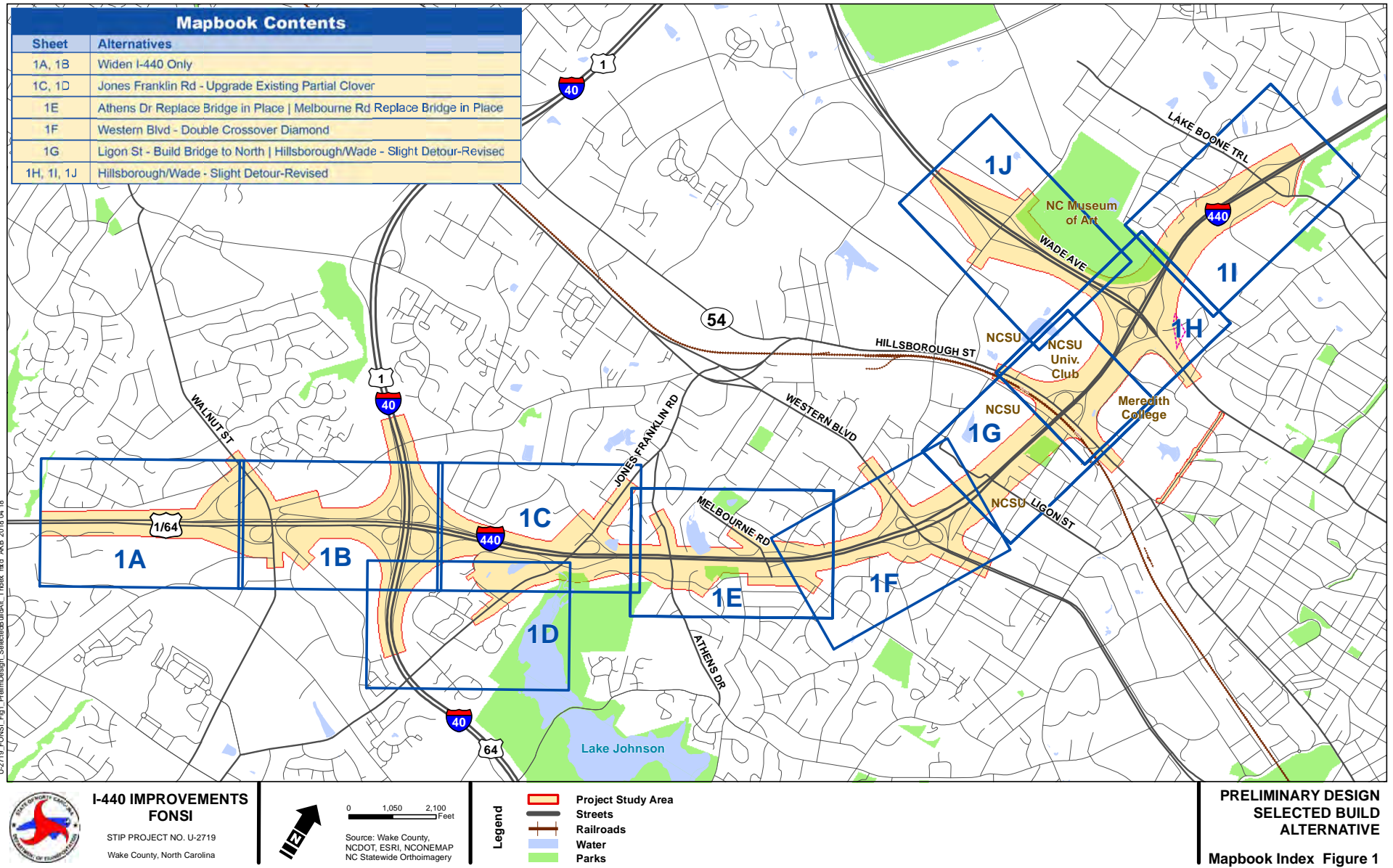
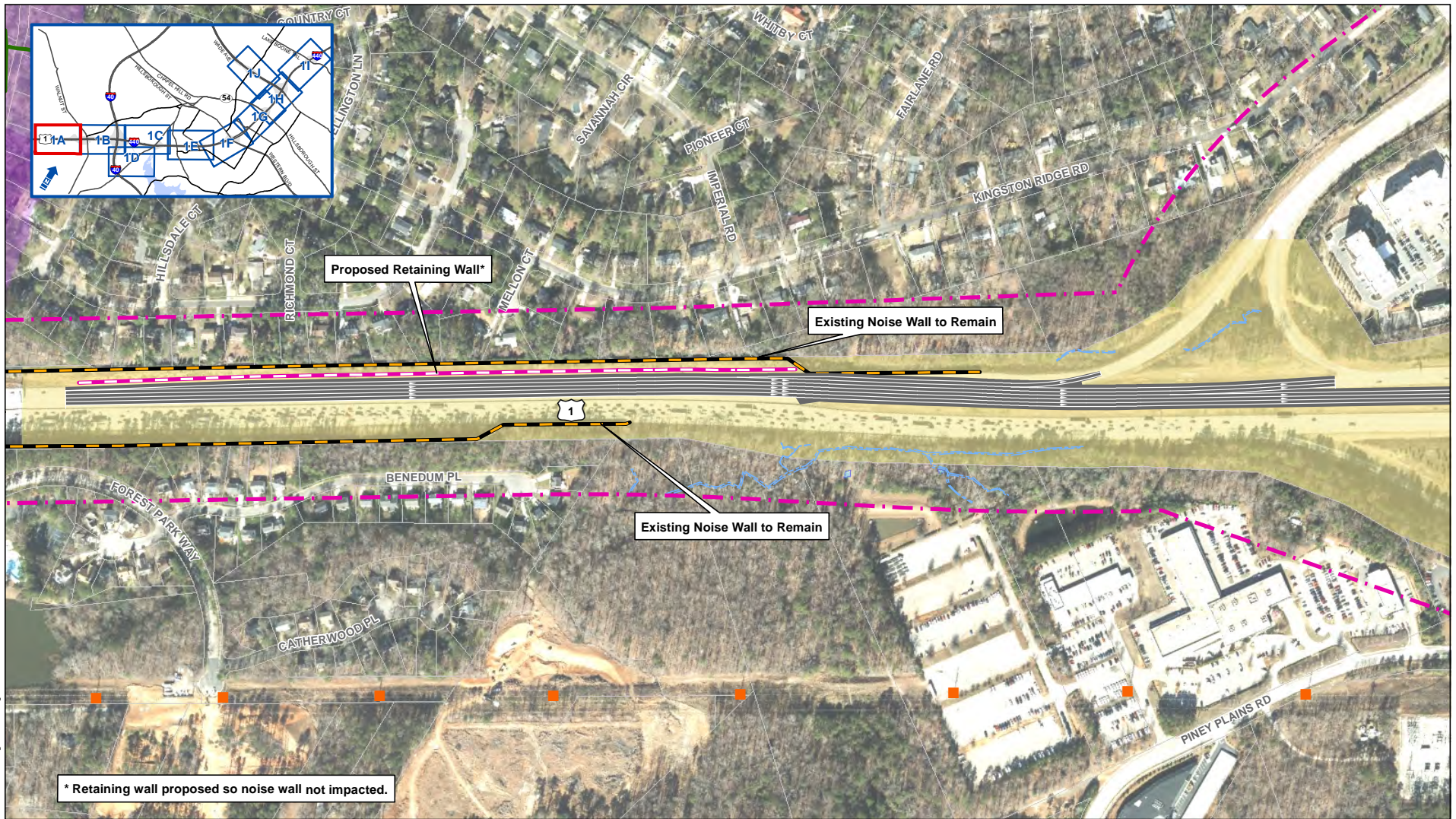






Figure 1a: Widen I-440 Only Alternative



\* Retaining wall proposed so noise wall not impacted.




**I-440 IMPROVEMENTS FONSI**  
STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

Source: Wake County, NCDOT, ESRI, NCONEMAP  
NC Statewide Orthoimagery

**Legend**

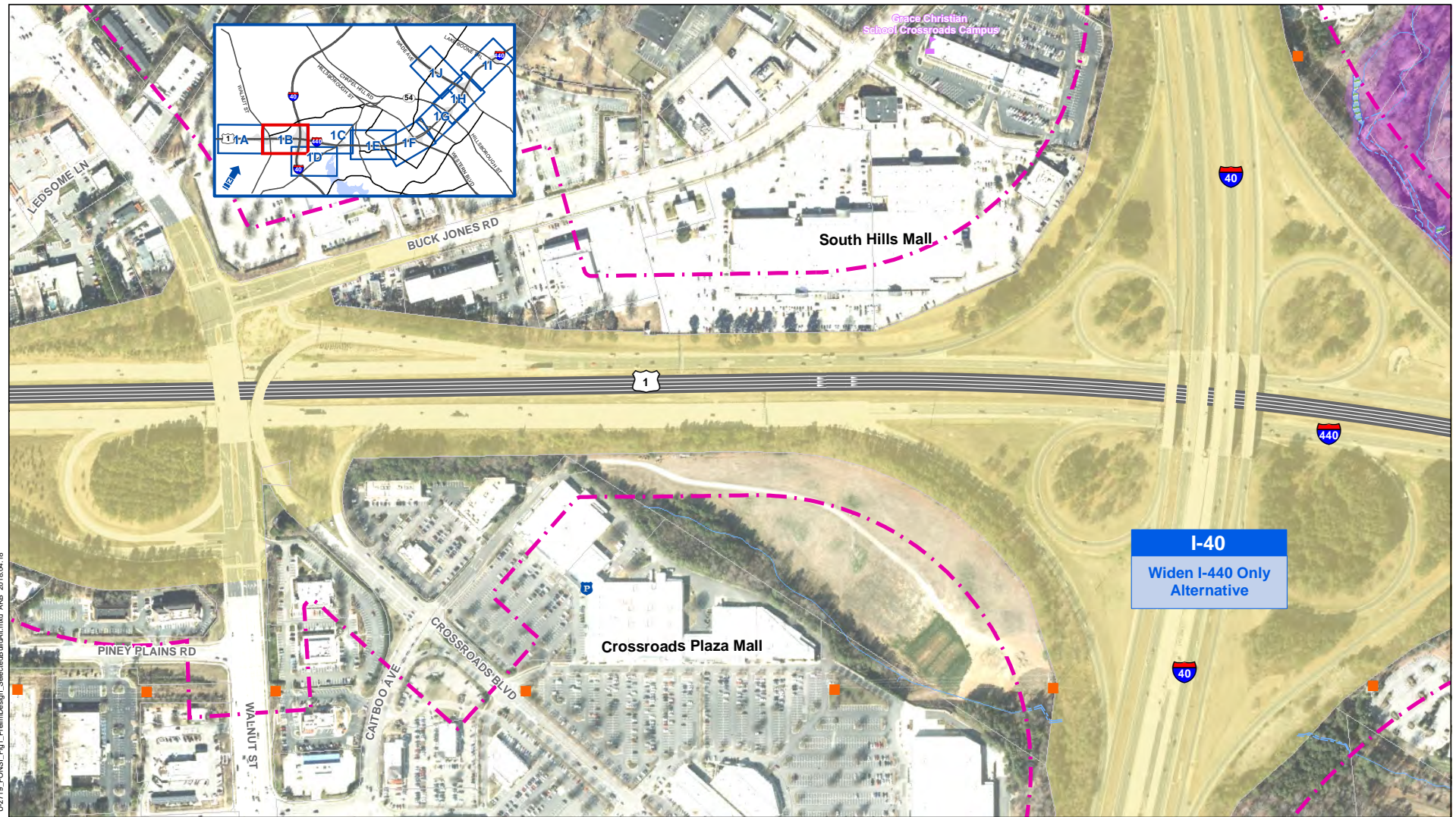
- Study Area Boundary
- Existing Noise Walls
- Existing Right of Way
- Proposed Right of Way
- Proposed Construction Easement
- Prop Easement Permanent Drainage
- Proposed Bridges
- Proposed Paved Area
- Proposed Lane Lines
- Proposed Median Barrier
- Proposed Curb and Gutter
- Proposed Retaining Wall
- Existing Power Towers
- Multi-Use Paths
- Potential Greenway Relocation
- Proposed Greenway Removal
- Existing Greenways
- Parks
- Parcels
- Railroads
- Historic Site
- Delineated Streams
- Other Streams
- Delineated Wetlands
- Delineated Ponds
- Floodway
- 100 Year Floodzone
-  Traffic Signal

**PRELIMINARY DESIGN  
SELECTED BUILD  
ALTERNATIVE**

Mapbook - Figure 1A



Figure 1b: Widen I-440 Only Alternative

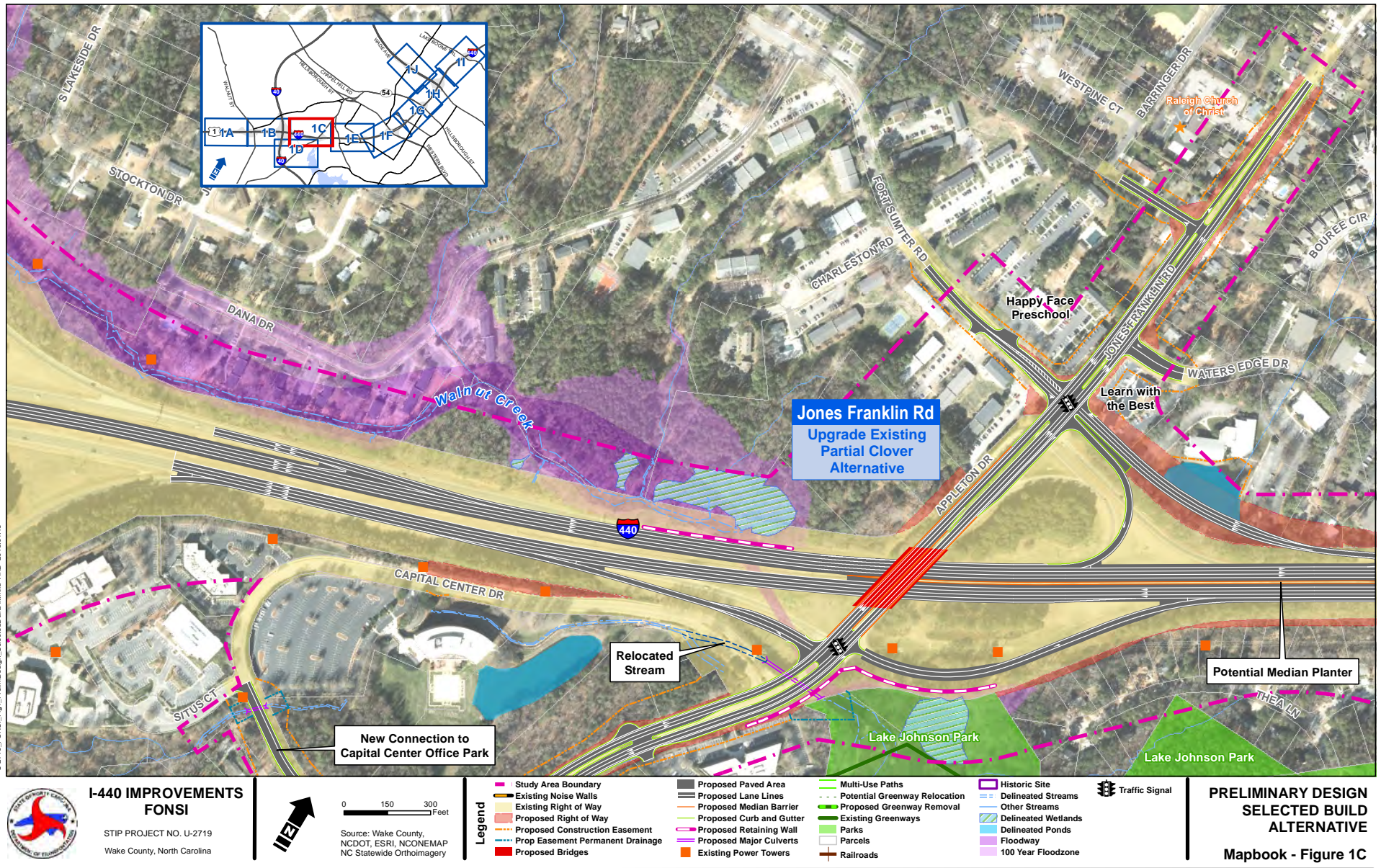


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<p><b>I-440 IMPROVEMENTS FONSI</b> STIP PROJECT NO. U-2719 Wake County, North Carolina</p>	<p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomography</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">---</span> Study Area Boundary</li> <li><span style="color: yellow;">---</span> Existing Noise Walls</li> <li><span style="color: orange;">---</span> Existing Right of Way</li> <li><span style="color: red;">---</span> Proposed Right of Way</li> <li><span style="color: orange;">---</span> Proposed Construction Easement</li> <li><span style="color: blue;">---</span> Prop Easement Permanent Drainage</li> <li><span style="color: red;">---</span> Proposed Bridges</li> <li><span style="color: grey;">---</span> Proposed Paved Area</li> <li><span style="color: grey;">---</span> Proposed Lane Lines</li> <li><span style="color: orange;">---</span> Proposed Median Barrier</li> <li><span style="color: green;">---</span> Proposed Curb and Gutter</li> <li><span style="color: magenta;">---</span> Proposed Retaining Wall</li> <li><span style="color: orange;">---</span> Proposed Major Culverts</li> <li><span style="color: orange;">---</span> Existing Power Towers</li> <li><span style="color: green;">---</span> Multi-Use Paths</li> <li><span style="color: green;">---</span> Potential Greenway Relocation</li> <li><span style="color: green;">---</span> Proposed Greenway Removal</li> <li><span style="color: green;">---</span> Existing Greenways</li> <li><span style="color: green;">---</span> Parks</li> <li><span style="color: grey;">---</span> Parcels</li> <li><span style="color: brown;">---</span> Railroads</li> <li><span style="color: purple;">---</span> Historic Site</li> <li><span style="color: blue;">---</span> Delineated Streams</li> <li><span style="color: blue;">---</span> Other Streams</li> <li><span style="color: blue;">---</span> Delineated Wetlands</li> <li><span style="color: blue;">---</span> Delineated Ponds</li> <li><span style="color: purple;">---</span> Floodway</li> <li><span style="color: purple;">---</span> 100 Year Floodzone</li> </ul>	<p> Traffic Signal</p>	<p><b>PRELIMINARY DESIGN SELECTED BUILD ALTERNATIVE</b></p> <p>Mapbook - Figure 1B</p>
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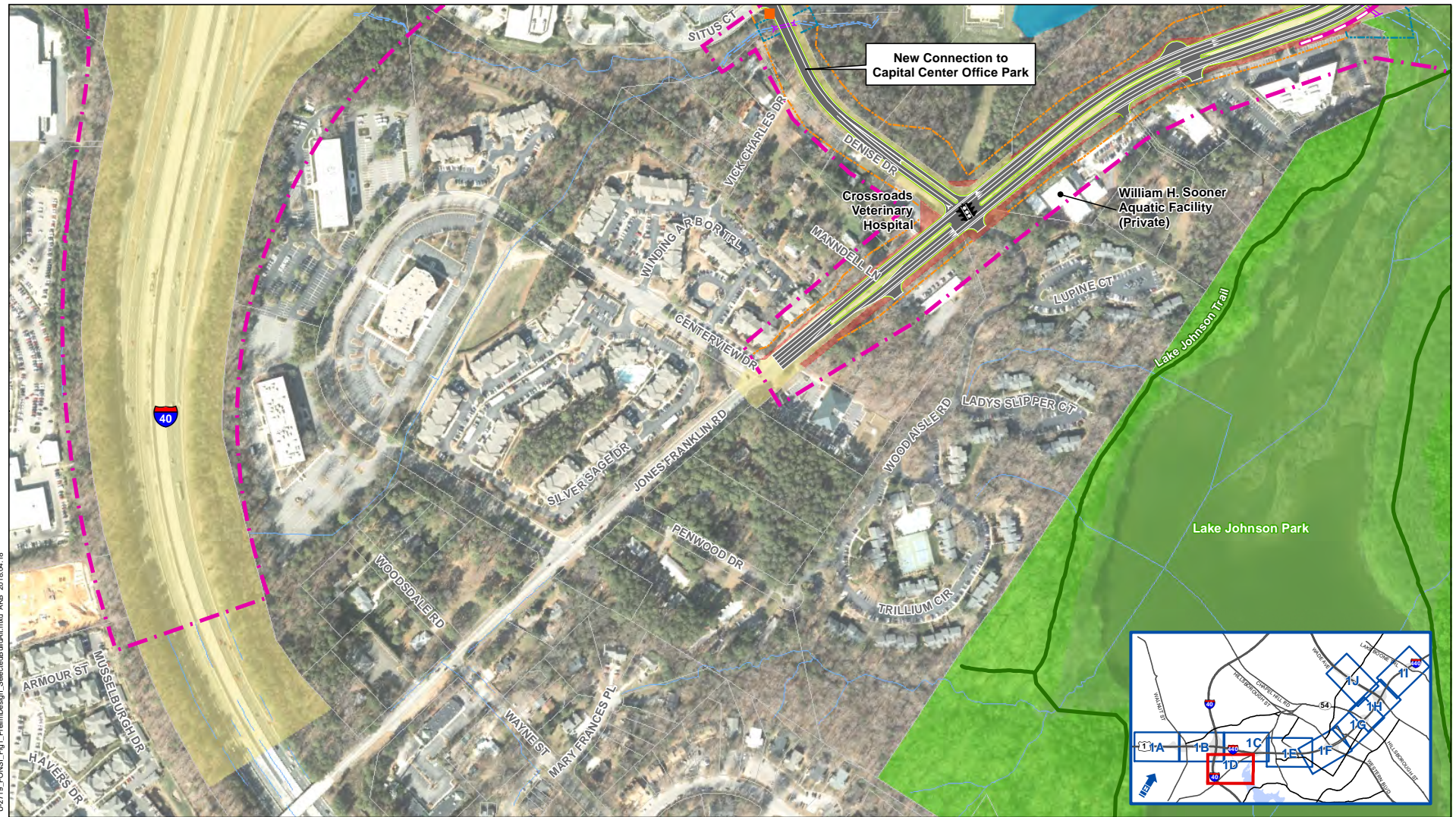
Figure 1c: Jones Franklin Rd Interchange - Upgrade Existing Partial Clover Alternative



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Figure 1d: Jones Franklin Rd Interchange - Upgrade Existing Partial Clover Alternative

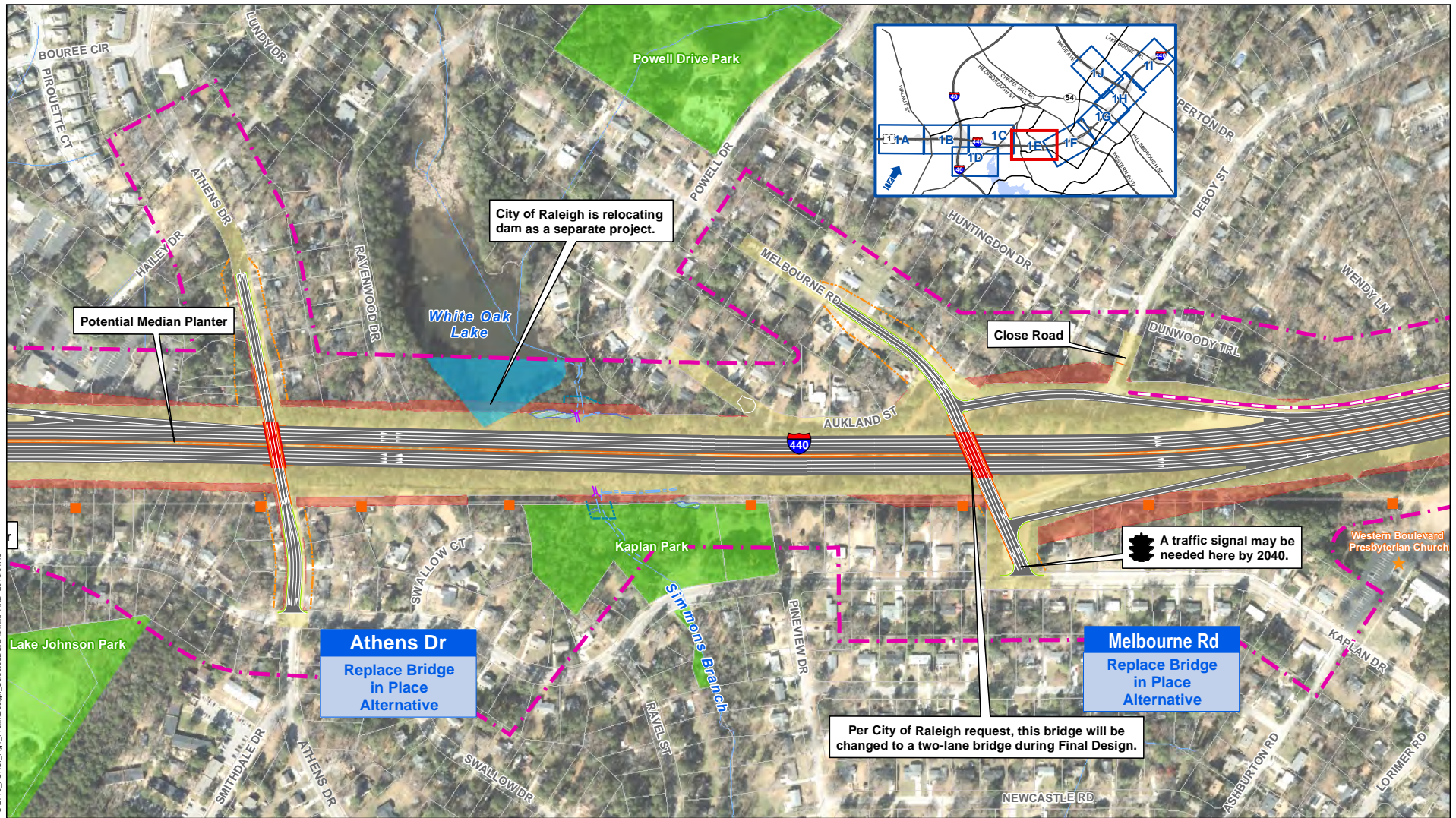



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	<p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719 Wake County, North Carolina</p>		<p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomography</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Study Area Boundary</li> <li>Existing Noise Walls</li> <li>Existing Right of Way</li> <li>Proposed Right of Way</li> <li>Proposed Construction Easement</li> <li>Prop Easement Permanent Drainage</li> <li>Proposed Bridges</li> </ul>	<ul style="list-style-type: none"> <li>Proposed Paved Area</li> <li>Proposed Lane Lines</li> <li>Proposed Median Barrier</li> <li>Proposed Curb and Gutter</li> <li>Proposed Retaining Wall</li> <li>Proposed Major Culverts</li> <li>Existing Power Towers</li> </ul>	<ul style="list-style-type: none"> <li>Multi-Use Paths</li> <li>Potential Greenway Relocation</li> <li>Proposed Greenway Removal</li> <li>Existing Greenways</li> <li>Parks</li> <li>Parcels</li> <li>Railroads</li> </ul>	<ul style="list-style-type: none"> <li>Historic Site</li> <li>Delineated Streams</li> <li>Other Streams</li> <li>Delineated Wetlands</li> <li>Delineated Ponds</li> <li>Floodway</li> <li>100 Year Floodzone</li> </ul>	<ul style="list-style-type: none"> <li>Traffic Signal</li> </ul>	<p><b>PRELIMINARY DESIGN SELECTED BUILD ALTERNATIVE</b></p> <p>Mapbook - Figure 1D</p>
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**Figure 1e: Athens Dr Grade Separation - Replace Bridge in Place Alternative and Melbourne Rd Interchange - Replace Bridge in Place Alternative**






**I-440 IMPROVEMENTS FONSI**  
STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

Source: Wake County, NCDOT, ESRI, NCONEMAP, NC Statewide Orthimagery

**Legend**

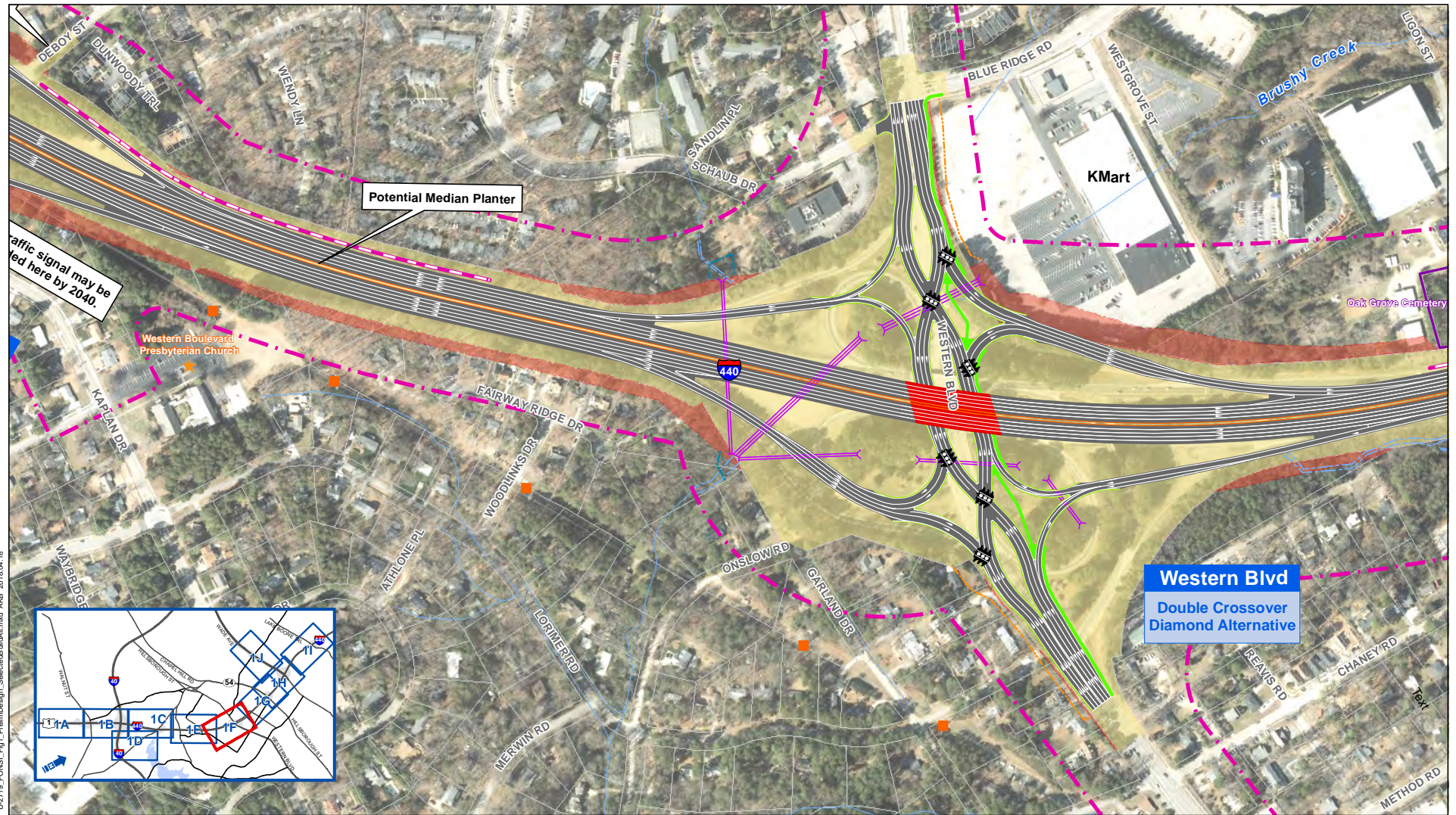
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-  Traffic Signal

**PRELIMINARY DESIGN  
SELECTED BUILD  
ALTERNATIVE**

Mapbook - Figure 1E



Figure 1f: Western Blvd Interchange - Double Crossover Diamond Alternative

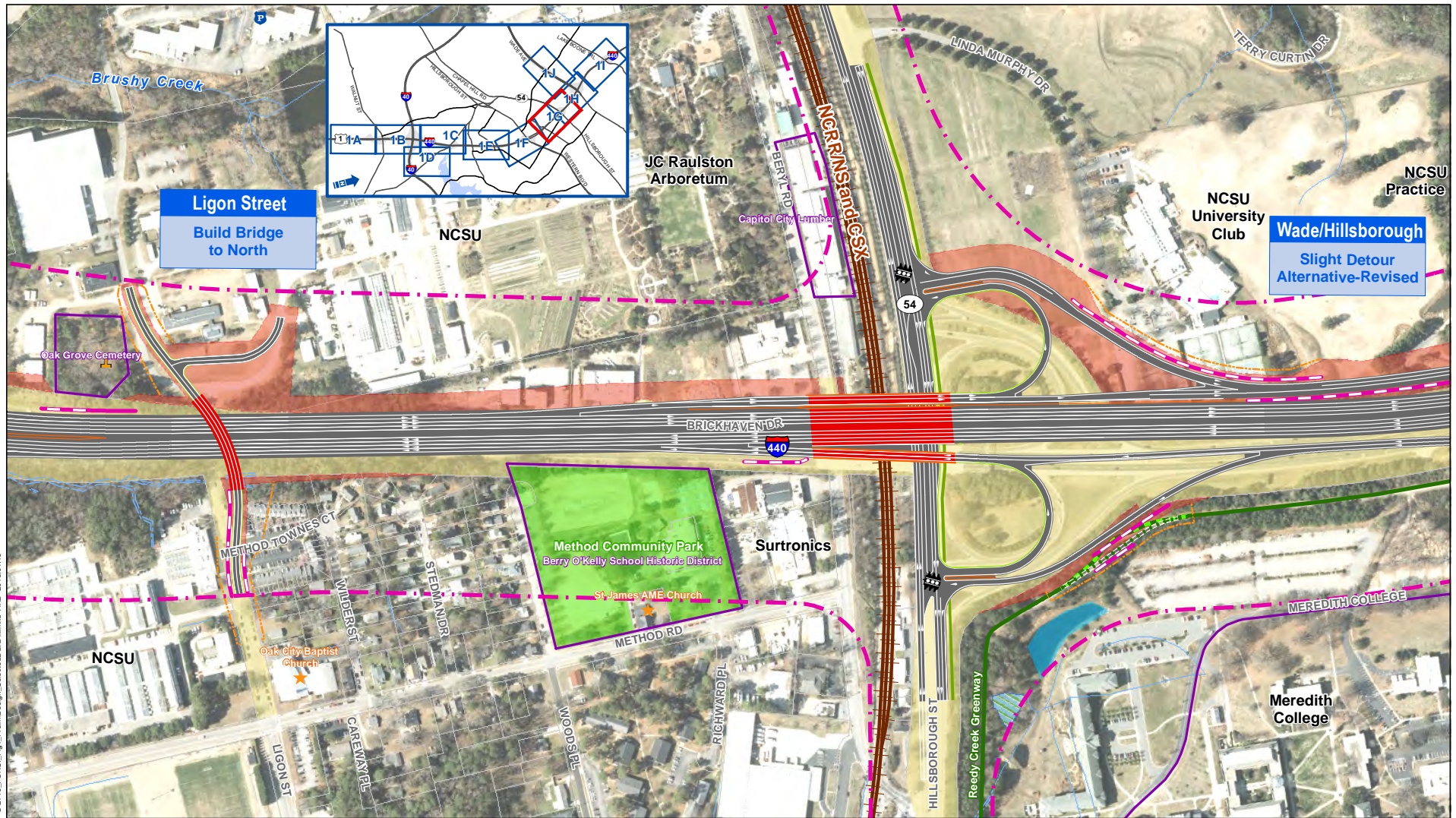


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	<p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719</p> <p>Wake County, North Carolina</p>		<p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomography</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">---</span> Study Area Boundary</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Existing Noise Walls</li> <li><span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> Existing Right of Way</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Right of Way</li> <li><span style="border: 1px dashed orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Construction Easement</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px;"></span> Prop Easement Permanent Drainage</li> <li><span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span> Proposed Bridges</li> <li><span style="background-color: gray; display: inline-block; width: 10px; height: 10px;"></span> Proposed Paved Area</li> <li><span style="border: 1px solid gray; display: inline-block; width: 10px; height: 10px;"></span> Proposed Lane Lines</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Median Barrier</li> <li><span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> Proposed Curb and Gutter</li> <li><span style="border: 1px solid magenta; display: inline-block; width: 10px; height: 10px;"></span> Proposed Retaining Wall</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Proposed Major Culverts</li> <li><span style="color: orange;">■</span> Existing Power Towers</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Multi-Use Paths</li> <li><span style="border: 1px dashed green; display: inline-block; width: 10px; height: 10px;"></span> Potential Greenway Relocation</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Proposed Greenway Removal</li> <li><span style="background-color: lightgreen; display: inline-block; width: 10px; height: 10px;"></span> Existing Greenways</li> <li><span style="background-color: lightgreen; display: inline-block; width: 10px; height: 10px;"></span> Parks</li> <li><span style="background-color: lightgray; display: inline-block; width: 10px; height: 10px;"></span> Parcels</li> <li><span style="border: 1px solid brown; display: inline-block; width: 10px; height: 10px;"></span> Railroads</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Historic Site</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Streams</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Other Streams</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Wetlands</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Ponds</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Floodway</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> 100 Year Floodzone</li> </ul>	<p> Traffic Signal</p>	<p><b>PRELIMINARY DESIGN SELECTED BUILD ALTERNATIVE</b></p> <p>Mapbook - Figure 1F</p>
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**Figure 1g: Ligon St Grade Separation - Build Bridge to North Alternative and Hillsborough St Interchange - Slight Detour Alternative-Revised**

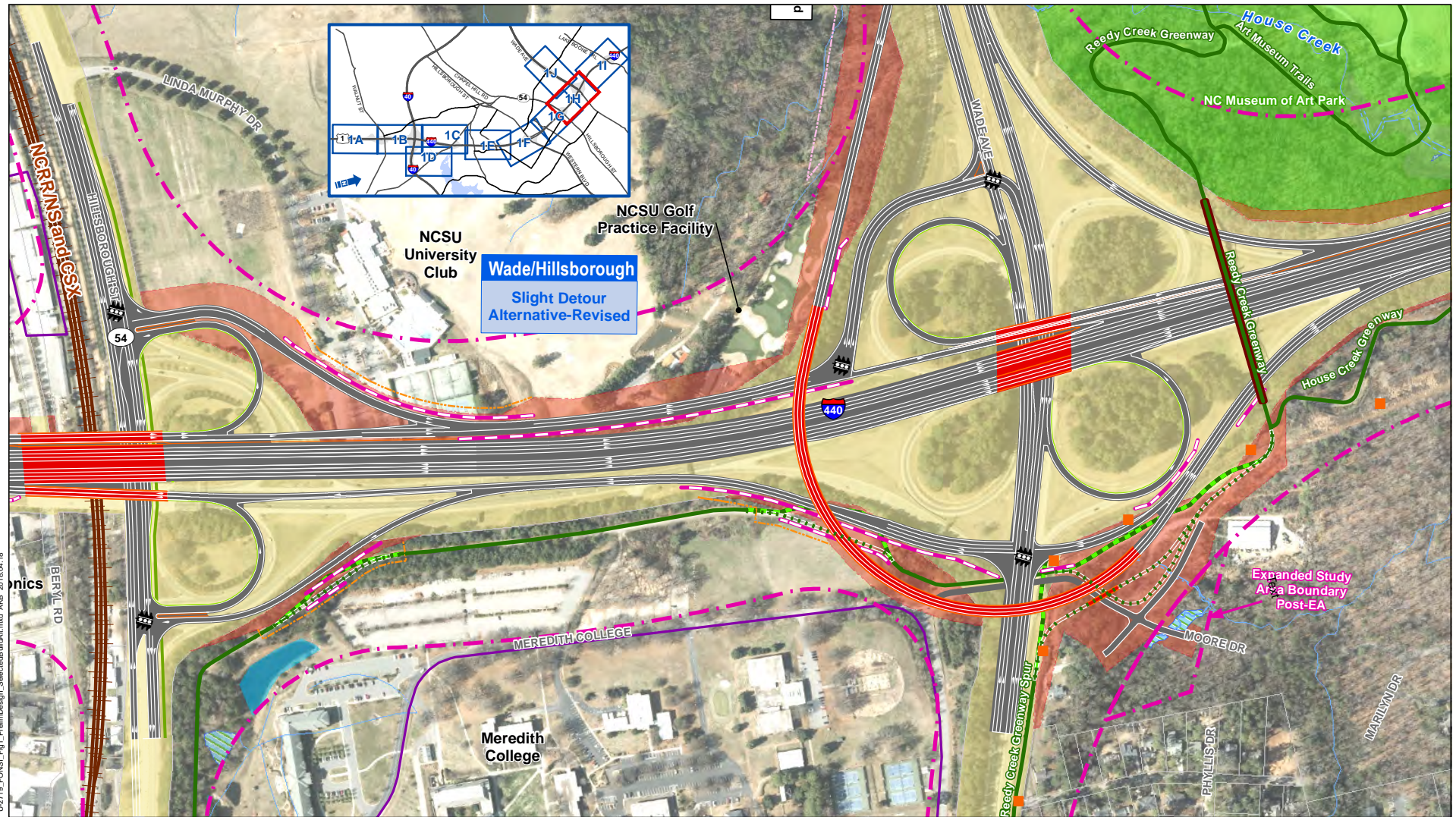


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<p><b>I-440 IMPROVEMENTS FONSI</b> STIP PROJECT NO. U-2719 Wake County, North Carolina</p>	<p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthoimagery</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: red;">—</span> Study Area Boundary</li> <li><span style="color: yellow;">—</span> Existing Noise Walls</li> <li><span style="color: orange;">—</span> Existing Right of Way</li> <li><span style="color: pink;">—</span> Proposed Right of Way</li> <li><span style="color: purple;">—</span> Proposed Construction Easement</li> <li><span style="color: blue;">—</span> Prop Easement Permanent Drainage</li> <li><span style="color: cyan;">—</span> Prop Easement Permanent Utility</li> <li><span style="color: red;">—</span> Proposed Bridges</li> <li><span style="color: grey;">—</span> Proposed Paved Area</li> <li><span style="color: black;">—</span> Proposed Lane Lines</li> <li><span style="color: brown;">—</span> Proposed Median Barrier</li> <li><span style="color: orange;">—</span> Proposed Curb and Gutter</li> <li><span style="color: purple;">—</span> Proposed Retaining Wall</li> <li><span style="color: orange;">—</span> Proposed Major Culverts</li> <li><span style="color: orange;">—</span> Existing Power Towers</li> <li><span style="color: green;">—</span> Multi-Use Paths</li> <li><span style="color: green;">—</span> Potential Greenway Relocation</li> <li><span style="color: green;">—</span> Proposed Greenway Removal</li> <li><span style="color: green;">—</span> Existing Greenways</li> <li><span style="color: green;">—</span> Parks</li> <li><span style="color: green;">—</span> Parcels</li> <li><span style="color: brown;">—</span> Railroads</li> <li><span style="color: purple;">—</span> Historic Site</li> <li><span style="color: blue;">—</span> Delineated Streams</li> <li><span style="color: blue;">—</span> Other Streams</li> <li><span style="color: blue;">—</span> Delineated Wetlands</li> <li><span style="color: blue;">—</span> Delineated Ponds</li> <li><span style="color: blue;">—</span> Floodway</li> <li><span style="color: blue;">—</span> 100 Year Floodzone</li> </ul>	<p> Traffic Signal</p>	<p><b>PRELIMINARY DESIGN SELECTED BUILD ALTERNATIVE</b></p> <p>Mapbook - Figure 1G</p>




Figure 1h: Hillsborough St & Wade Ave Interchanges - Slight Detour Alternative-Revised



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**I-440 IMPROVEMENTS FONSI**  
STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

Source: Wake County, NCDOT, ESRI, NCONEMAP, NC Statewide Orthomography

**Legend**

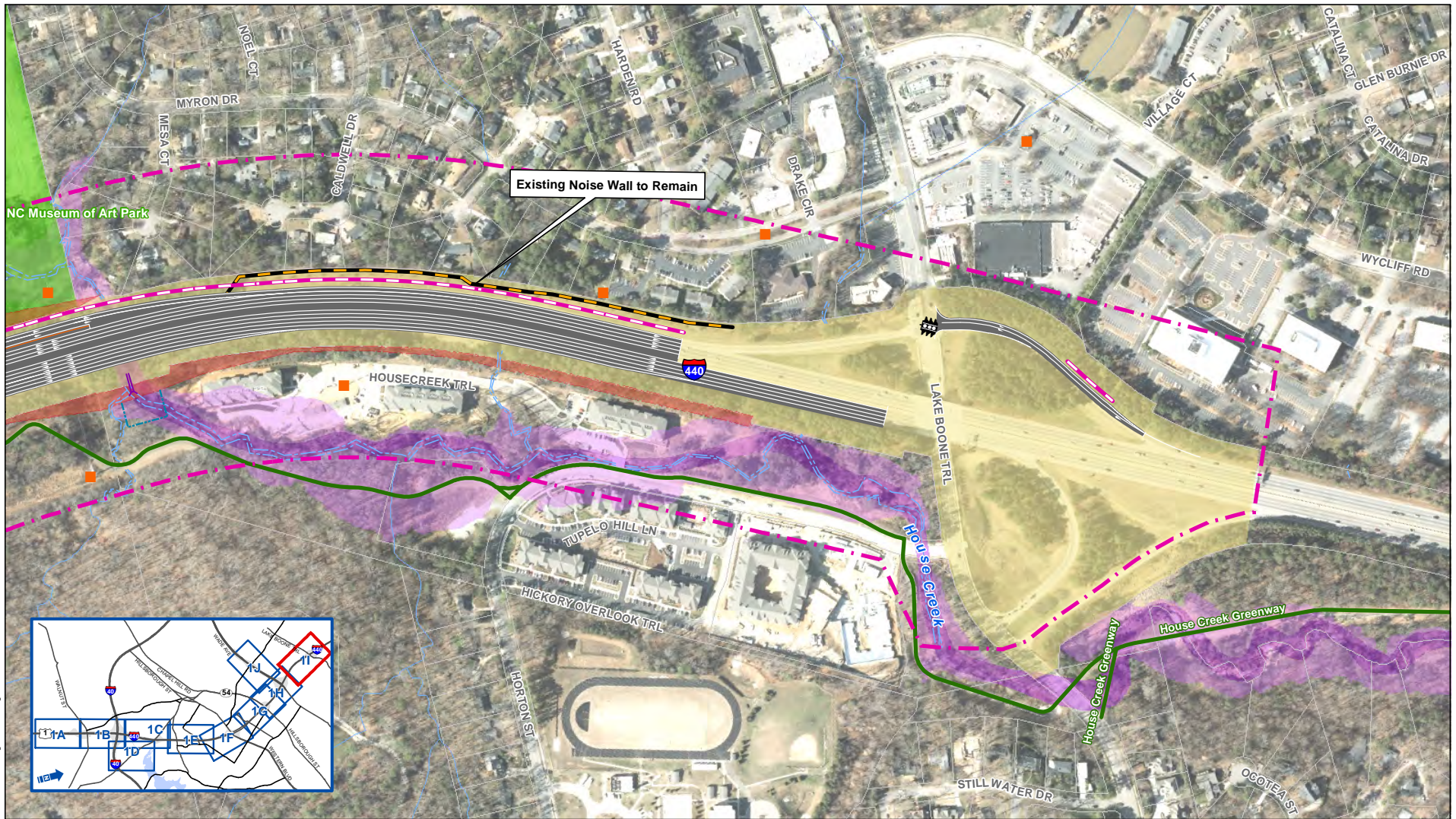
- Study Area Boundary
- Existing Noise Walls
- Existing Right of Way
- Proposed Right of Way
- Proposed Construction Easement
- Prop Easement Permanent Drainage
- Prop Easement Permanent Utility
- Proposed Bridges
- Proposed Paved Area
- Proposed Lane Lines
- Proposed Median Barrier
- Proposed Curb and Gutter
- Proposed Retaining Wall
- Existing Power Towers
- Multi-Use Paths
- Potential Greenway Relocation
- Proposed Greenway Removal
- Existing Greenways
- Parks
- Parcels
- Railroads
- Historic Site
- Delineated Streams
- Other Streams
- Delineated Wetlands
- Delineated Ponds
- Floodway
- 100 Year Floodzone
-  Traffic Signal

**PRELIMINARY DESIGN  
SELECTED BUILD  
ALTERNATIVE**

Mapbook - Figure 1H



Figure 1i: Hillsborough St & Wade Ave Interchanges - Slight Detour Alternative-Revised

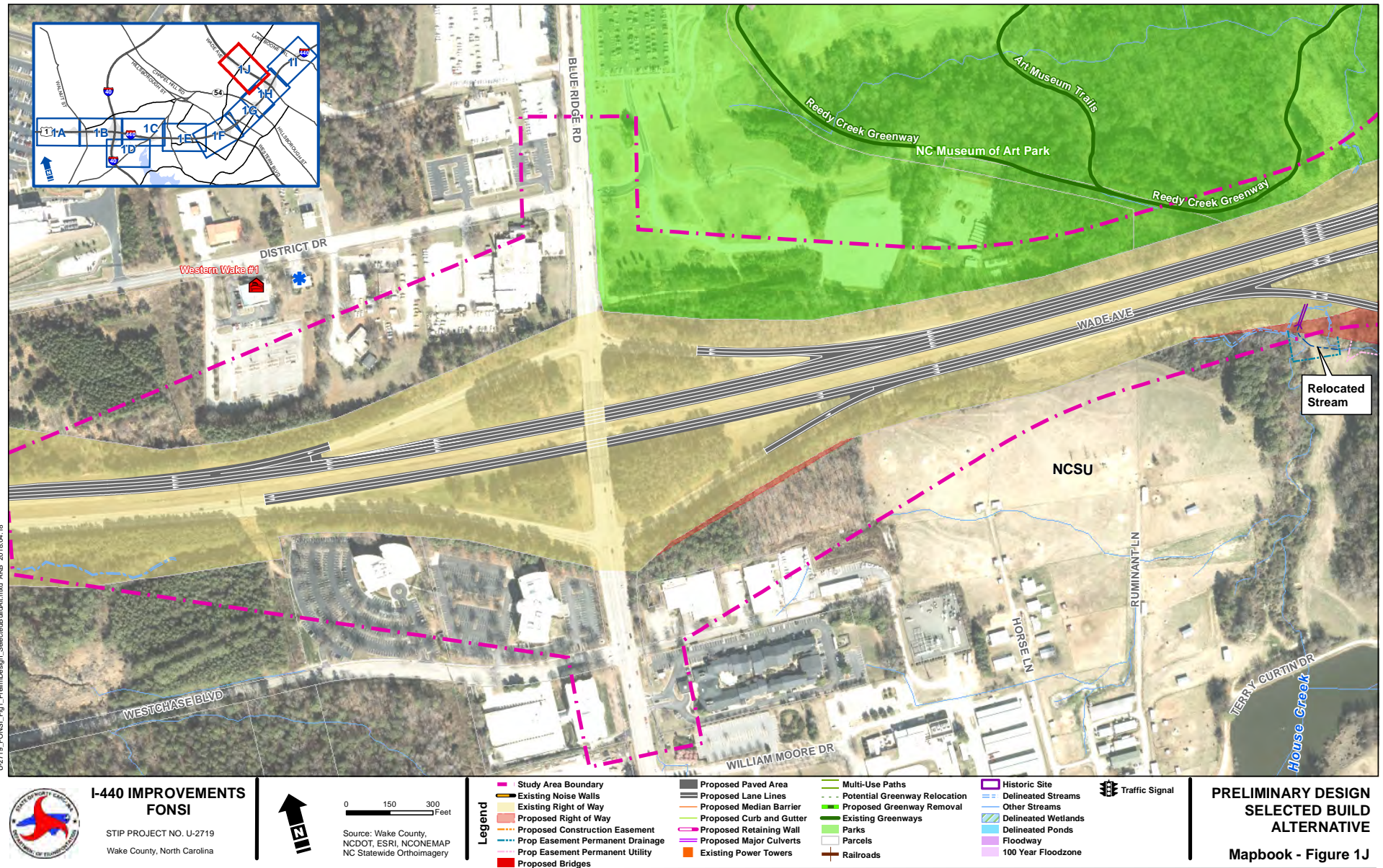


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	<p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719</p> <p>Wake County, North Carolina</p>	<p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomogery</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">---</span> Study Area Boundary</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Existing Noise Walls</li> <li><span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> Existing Right of Way</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Right of Way</li> <li><span style="border: 1px dashed orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Construction Easement</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px;"></span> Prop Easement Permanent Drainage</li> <li><span style="border: 1px dashed pink; display: inline-block; width: 10px; height: 10px;"></span> Prop Easement Permanent Utility</li> <li><span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span> Proposed Bridges</li> <li><span style="border: 1px solid gray; display: inline-block; width: 10px; height: 10px;"></span> Proposed Paved Area</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Proposed Lane Lines</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Proposed Median Barrier</li> <li><span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> Proposed Curb and Gutter</li> <li><span style="border: 1px solid magenta; display: inline-block; width: 10px; height: 10px;"></span> Proposed Retaining Wall</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Existing Power Towers</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Multi-Use Paths</li> <li><span style="border: 1px dashed green; display: inline-block; width: 10px; height: 10px;"></span> Potential Greenway Relocation</li> <li><span style="border: 1px dashed red; display: inline-block; width: 10px; height: 10px;"></span> Proposed Greenway Removal</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Existing Greenways</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Parks</li> <li><span style="border: 1px solid gray; display: inline-block; width: 10px; height: 10px;"></span> Parcels</li> <li><span style="border: 1px solid brown; display: inline-block; width: 10px; height: 10px;"></span> Railroads</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Historic Site</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Streams</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Other Streams</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Wetlands</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> Delineated Ponds</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Floodway</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> 100 Year Floodzone</li> </ul>	<ul style="list-style-type: none"> <li> Traffic Signal</li> </ul>	<p><b>PRELIMINARY DESIGN SELECTED BUILD ALTERNATIVE</b></p> <p>Mapbook - Figure 11</p>
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Figure 1j: Hillsborough St & Wade Ave Interchanges - Slight Detour Alternative-Revised



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# APPENDICES

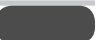
**Appendix A: Preliminary Designs and Impact Comparisons for One Flyover Alternative-Revised  
and Slight Detour Alternative-Revised ..... A-1**

**Appendix B: Agency Correspondence ..... B-1**

- B.1 NEPA/404 Merger Process Concurrence Forms**
- B.2 SHPO Correspondence**
- B.3 Section 4(f) Correspondence**
- B.4 USACE Public Hearing Notice**

**Appendix C: Comments and Responses to Comments ..... C-1**

- C.1 Tallies of Commenter Preferences**
- C.2 Common Comments**
- C.3 Agencies and Organizations**
- C.4 Public Hearing Transcript**
- C.5 Comment Forms**
- C.6 Emails and Letters**
- C.7 On-Line Comment Forum**

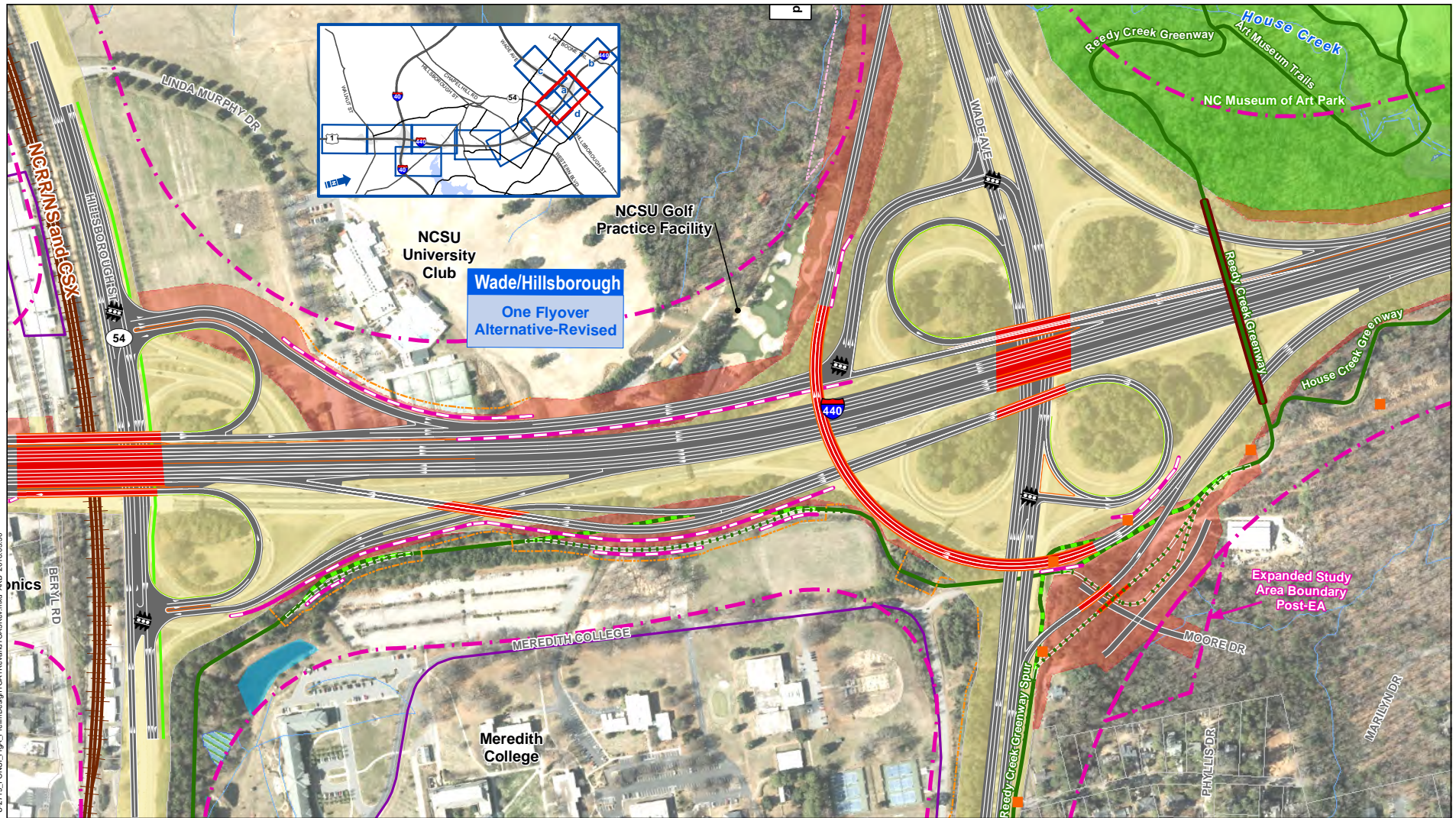


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# **PRELIMINARY DESIGNS AND IMPACT COMPARISONS FOR: ONE FLYOVER ALTERNATIVE-REVISED AND SLIGHT DETOUR ALTERNATIVE- REVISED**

Figure A1a: Preliminary Design for One Flyover Alternative-Revised

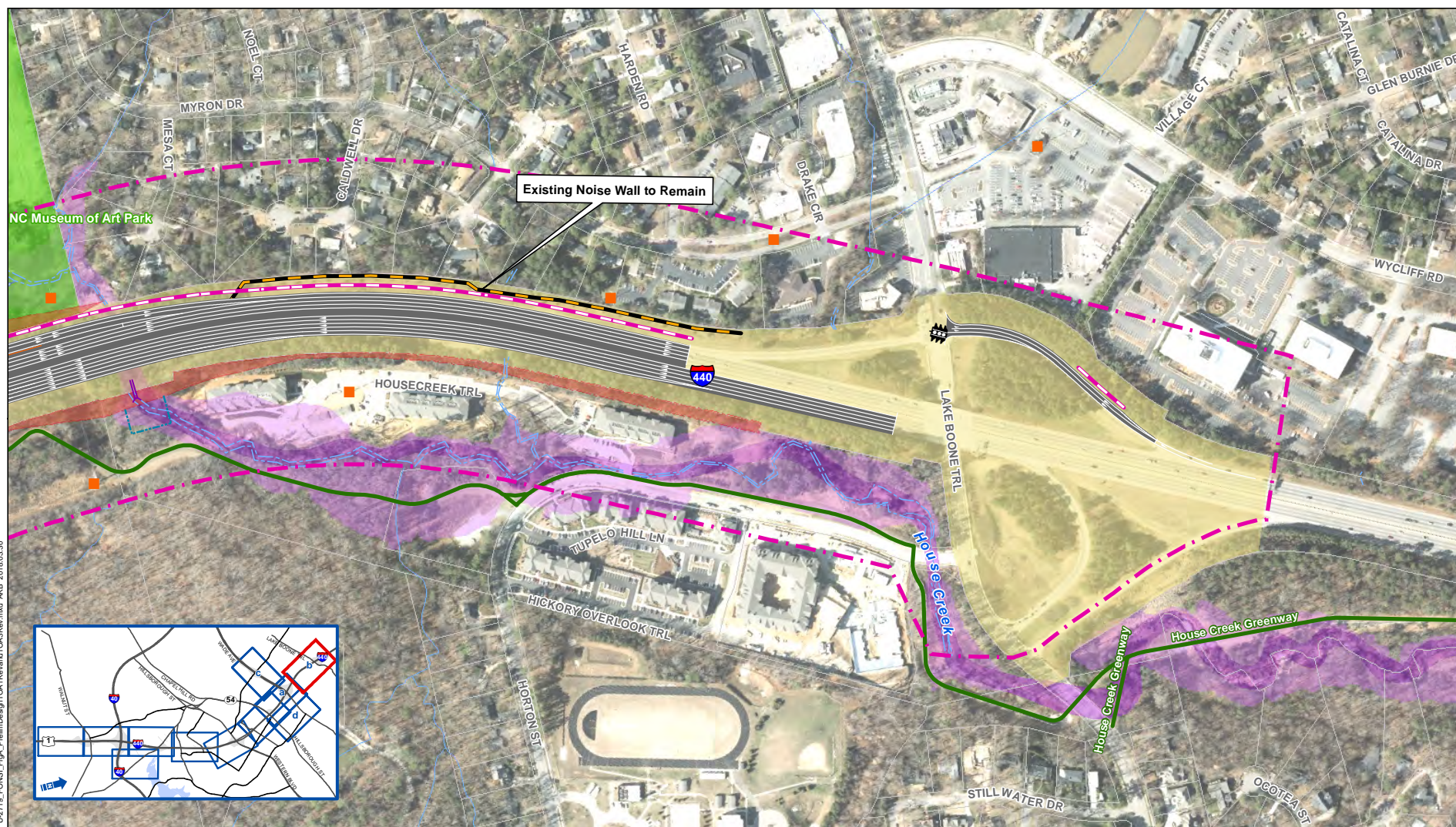


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 <p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719 Wake County, North Carolina</p>	 <p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomogery</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">—</span> Study Area Boundary</li> <li><span style="color: yellow;">—</span> Existing Noise Walls</li> <li><span style="color: orange;">—</span> Existing Right of Way</li> <li><span style="color: red;">—</span> Proposed Right of Way</li> <li><span style="color: orange;">—</span> Proposed Construction Easement</li> <li><span style="color: blue;">—</span> Prop Easement Permanent Drainage</li> <li><span style="color: blue;">—</span> Prop Easement Permanent Utility</li> <li><span style="color: red;">—</span> Proposed Bridges</li> <li><span style="color: grey;">—</span> Proposed Paved Area</li> <li><span style="color: grey;">—</span> Proposed Lane Lines</li> <li><span style="color: orange;">—</span> Proposed Median Barrier</li> <li><span style="color: green;">—</span> Proposed Curb and Gutter</li> <li><span style="color: green;">—</span> Proposed Retaining Wall</li> <li><span style="color: purple;">—</span> Proposed Major Culverts</li> <li><span style="color: orange;">—</span> Existing Power Towers</li> <li><span style="color: green;">—</span> Multi-Use Paths</li> <li><span style="color: green;">—</span> Potential Greenway Relocation</li> <li><span style="color: green;">—</span> Proposed Greenway Removal</li> <li><span style="color: green;">—</span> Existing Greenways</li> <li><span style="color: green;">—</span> Parks</li> <li><span style="color: grey;">—</span> Parcels</li> <li><span style="color: brown;">—</span> Railroads</li> <li><span style="color: purple;">—</span> Historic Site</li> <li><span style="color: blue;">—</span> Delineated Streams</li> <li><span style="color: blue;">—</span> Other Streams</li> <li><span style="color: blue;">—</span> Delineated Wetlands</li> <li><span style="color: blue;">—</span> Delineated Ponds</li> <li><span style="color: purple;">—</span> Floodway</li> <li><span style="color: purple;">—</span> 100 Year Floodzone</li> <li> Traffic Signal</li> </ul>	<p><b>PRELIMINARY DESIGN FOR ONE FLYOVER ALTERNATIVE-REVISED</b></p> <p><b>Mapbook - Figure A1a</b></p>
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Figure A1b: Preliminary Design for One Flyover Alternative-Revised



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**I-440 IMPROVEMENTS  
FONSI**

STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

Source: Wake County,  
NCDOT, ESRI, NCONEMAP  
NC Statewide Orthomography

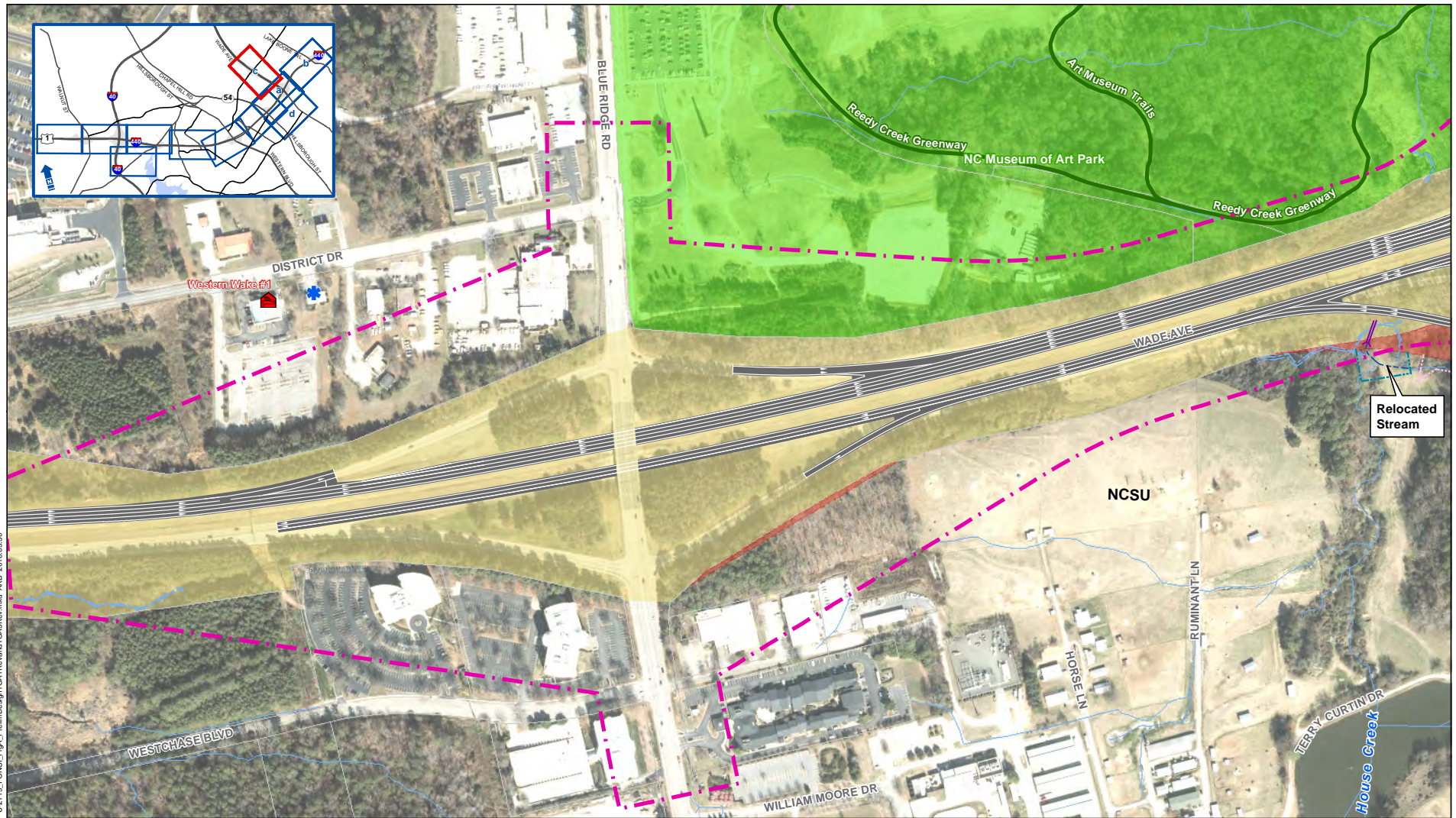
**Legend**

- Study Area Boundary
- Existing Noise Walls
- Existing Right of Way
- Proposed Construction Easement
- Prop Easement Permanent Drainage
- Prop Easement Permanent Utility
- Proposed Bridges
- Proposed Paved Area
- Proposed Lane Lines
- Proposed Median Barrier
- Proposed Curb and Gutter
- Proposed Retaining Wall
- Proposed Major Culverts
- Existing Power Towers
- Multi-Use Paths
- Potential Greenway Relocation
- Proposed Greenway Removal
- Existing Greenways
- Parks
- Parcels
- Railroads
- Historic Site
- Delineated Streams
- Other Streams
- Delineated Wetlands
- Delineated Ponds
- Floodway
- 100 Year Floodzone
- Traffic Signal

**PRELIMINARY DESIGN  
FOR ONE FLYOVER  
ALTERNATIVE-REVISED**  
Mapbook - Figure A1b



Figure A1c: Preliminary Design for One Flyover Alternative-Revised



U-2719\_FONSI\_FigA\_PrelimDesignTOA1RevandTOA3Rev.mxd AKB 2018.03.30



**I-440 IMPROVEMENTS  
FONSI**

STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

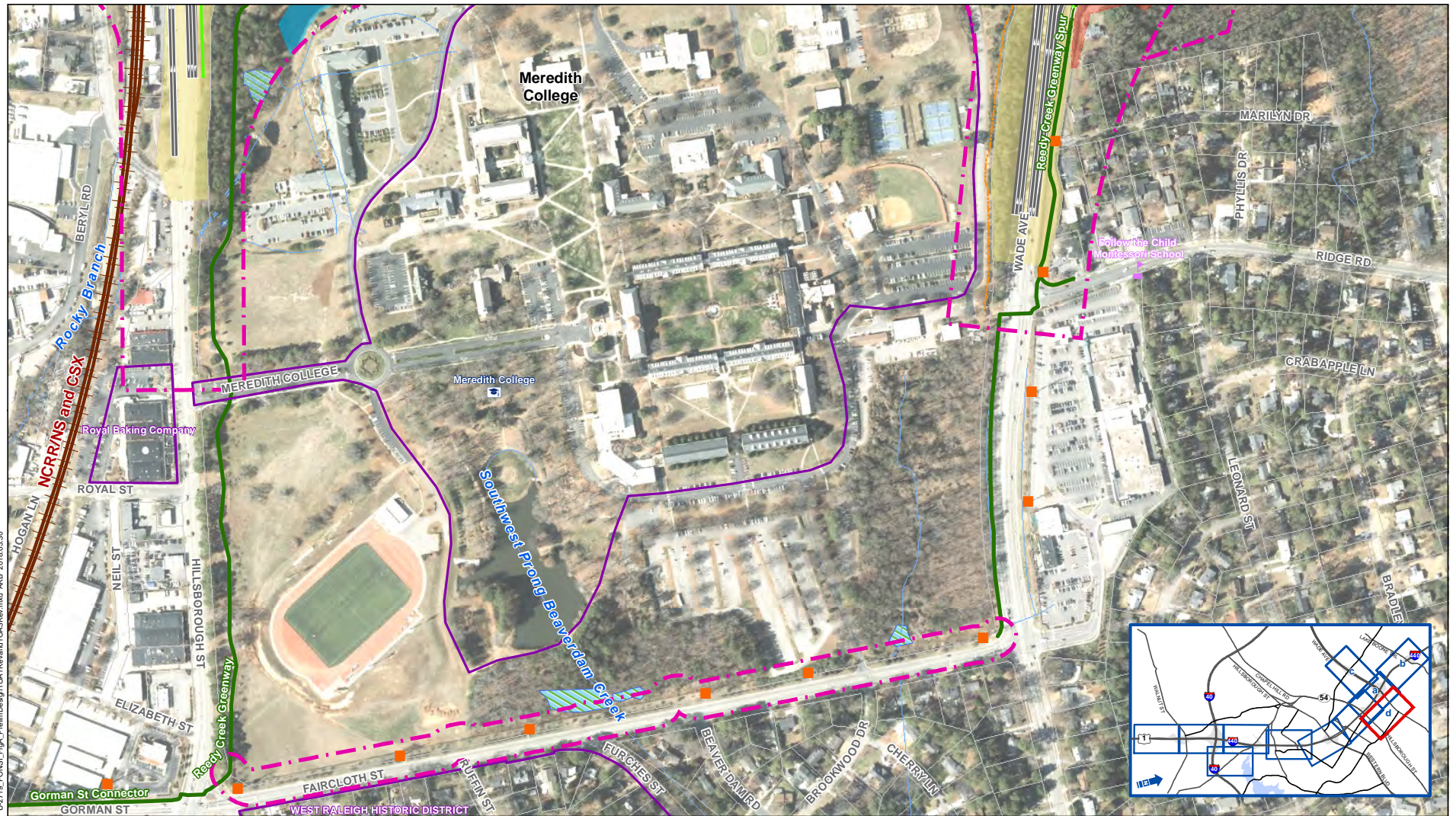
Source: Wake County,  
NCDOT, ESRI, NCONEMAP  
NC Statewide Orthomagey

- |   |  |  |   |  |
|---|--|--|---|--|
| <p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Study Area Boundary</li> <li>Existing Noise Walls</li> <li>Existing Right of Way</li> <li>Proposed Right of Way</li> <li>Proposed Construction Easement</li> <li>Prop Easement Permanent Drainage</li> <li>Prop Easement Permanent Utility</li> <li>Proposed Bridges</li> </ul> | <ul style="list-style-type: none"> <li>Proposed Paved Area</li> <li>Proposed Lane Lines</li> <li>Proposed Median Barrier</li> <li>Proposed Curb and Gutter</li> <li>Proposed Retaining Wall</li> <li>Proposed Major Culverts</li> <li>Existing Power Towers</li> </ul> | <ul style="list-style-type: none"> <li>Multi-Use Paths</li> <li>Potential Greenway Relocation</li> <li>Proposed Greenway Removal</li> <li>Existing Greenways</li> <li>Parks</li> <li>Parcels</li> <li>Railroads</li> </ul> | <ul style="list-style-type: none"> <li>Historic Site</li> <li>Delineated Streams</li> <li>Other Streams</li> <li>Delineated Wetlands</li> <li>Delineated Ponds</li> <li>Floodway</li> <li>100 Year Floodzone</li> </ul> | <ul style="list-style-type: none"> <li>Traffic Signal</li> </ul> |
|---|--|--|---|--|

**PRELIMINARY DESIGN  
FOR ONE FLYOVER  
ALTERNATIVE-REVISED**  
Mapbook - Figure A1c



Figure A1d: Preliminary Design for One Flyover Alternative-Revised



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**I-440 IMPROVEMENTS  
FONSI**

STIP PROJECT NO. U-2719  
Wake County, North Carolina



0 150 300 Feet

Source: Wake County, NCDOT, ESRI, NCONEMAP  
NC Statewide Orthomography

**Legend**

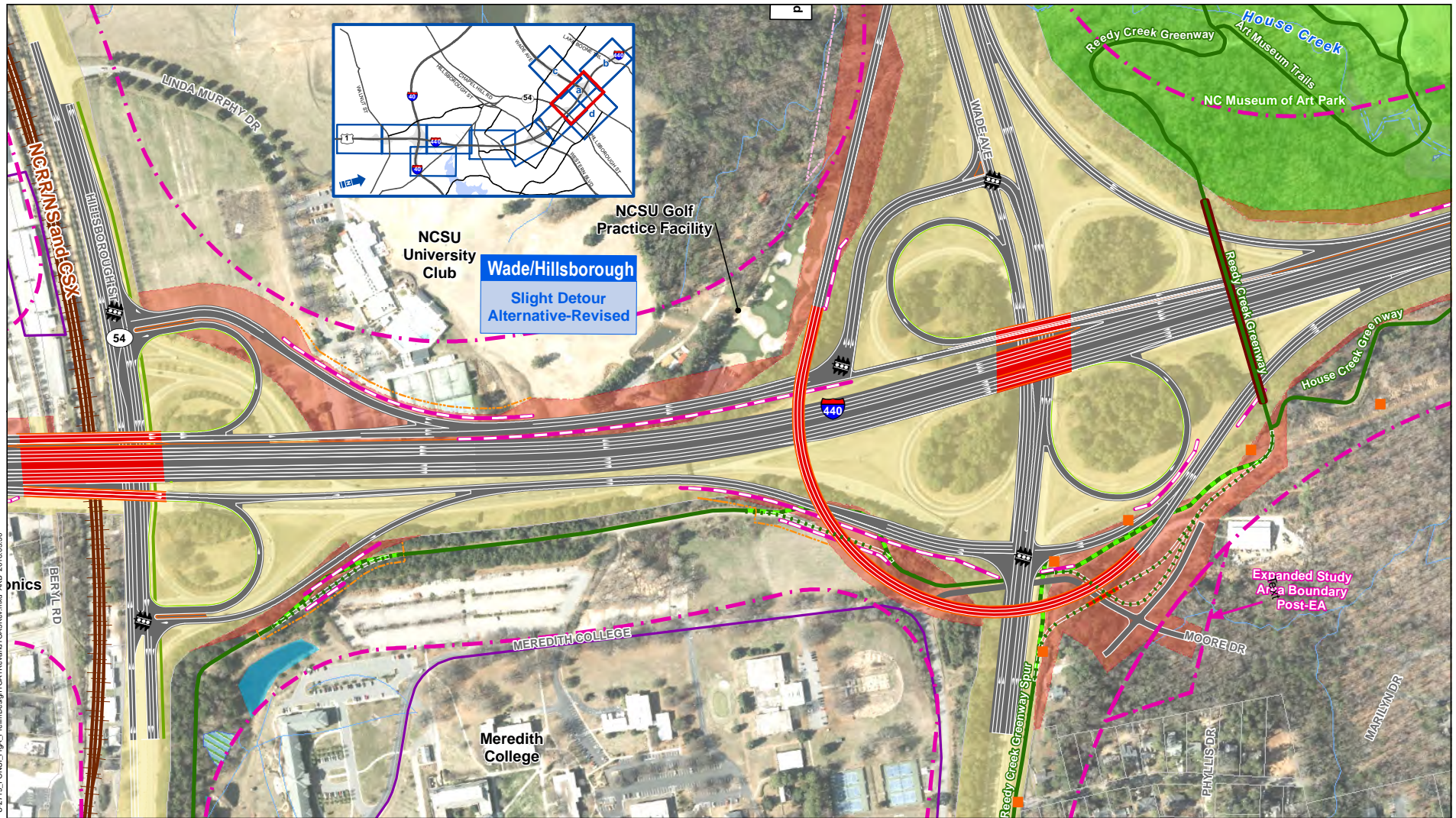
- Study Area Boundary
- Existing Noise Walls
- Existing Right of Way
- Proposed Right of Way
- Proposed Construction Easement
- Prop Easement Permanent Drainage
- Prop Easement Permanent Utility
- Proposed Bridges
- Proposed Paved Area
- Proposed Lane Lines
- Proposed Median Barrier
- Proposed Curb and Gutter
- Proposed Retaining Wall
- Proposed Major Culverts
- Existing Power Towers
- Multi-Use Paths
- Potential Greenway Relocation
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- Existing Greenways
- Parks
- Parcels
- Railroads
- Historic Site
- Delineated Streams
- Other Streams
- Delineated Wetlands
- Delineated Ponds
- Floodway
- 100 Year Floodzone
- Traffic Signal

**PRELIMINARY DESIGN  
FOR ONE FLYOVER  
ALTERNATIVE-REVISED**

Mapbook - Figure A1d



Figure A2a: Preliminary Design for Slight Detour Alternative-Revised



U-2719\_FONSI\_FigA\_PrelimDesignTOA3Rev.mxd AKB 2018.03.30

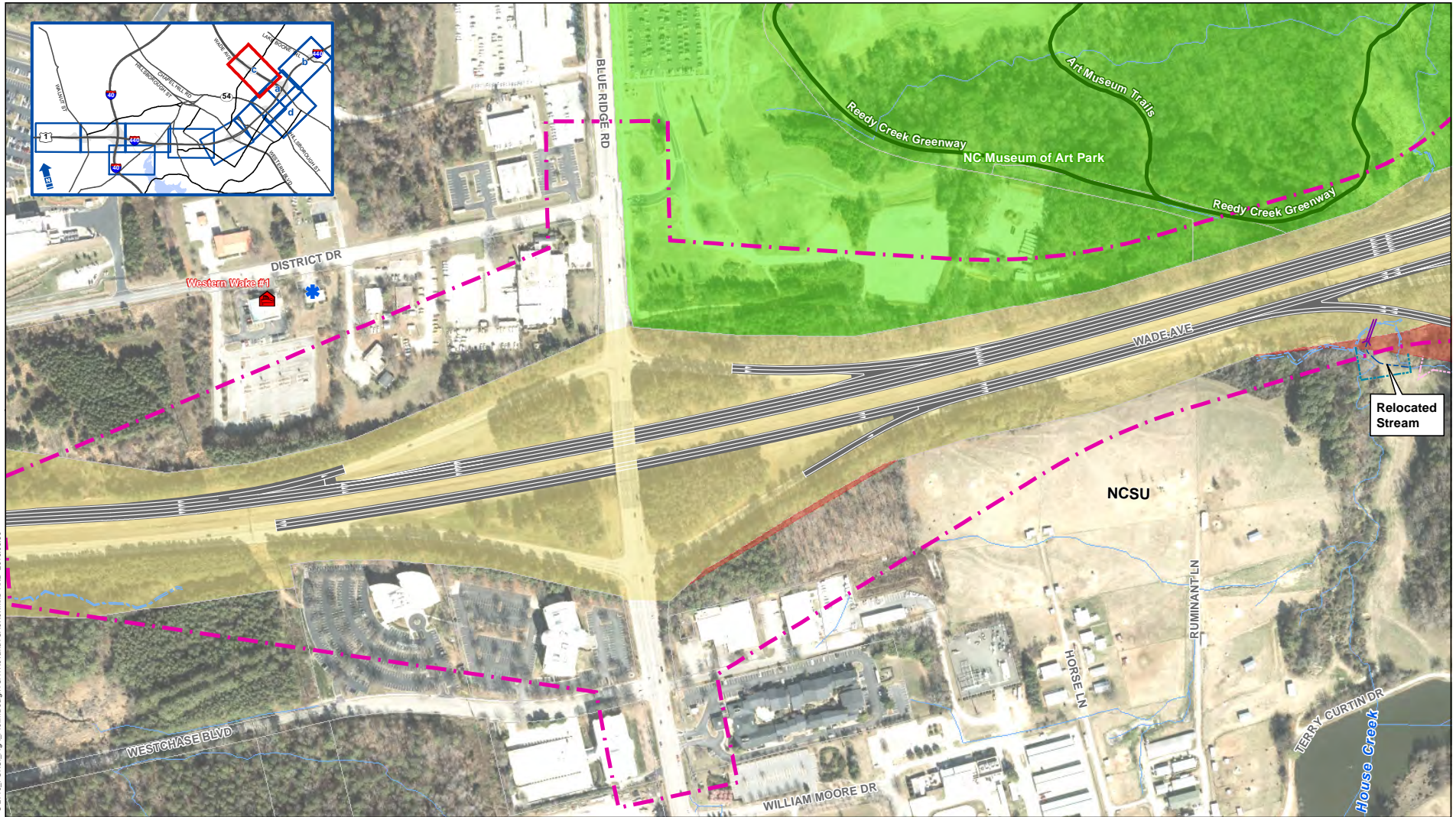
 <p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719 Wake County, North Carolina</p>	 <p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthoimagery</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">---</span> Study Area Boundary</li> <li><span style="color: yellow;">---</span> Existing Noise Walls</li> <li><span style="color: orange;">---</span> Existing Right of Way</li> <li><span style="color: red;">---</span> Proposed Right of Way</li> <li><span style="color: blue;">---</span> Proposed Construction Easement</li> <li><span style="color: green;">---</span> Prop Easement Permanent Drainage</li> <li><span style="color: purple;">---</span> Prop Easement Permanent Utility</li> <li><span style="color: red;">---</span> Proposed Bridges</li> <li><span style="color: grey;">---</span> Proposed Paved Area</li> <li><span style="color: black;">---</span> Proposed Lane Lines</li> <li><span style="color: brown;">---</span> Proposed Median Barrier</li> <li><span style="color: green;">---</span> Proposed Curb and Gutter</li> <li><span style="color: purple;">---</span> Proposed Retaining Wall</li> <li><span style="color: orange;">---</span> Proposed Major Culverts</li> <li><span style="color: orange;">---</span> Existing Power Towers</li> <li><span style="color: green;">---</span> Multi-Use Paths</li> <li><span style="color: green;">---</span> Potential Greenway Relocation</li> <li><span style="color: green;">---</span> Proposed Greenway Removal</li> <li><span style="color: green;">---</span> Existing Greenways</li> <li><span style="color: green;">---</span> Parks</li> <li><span style="color: grey;">---</span> Parcels</li> <li><span style="color: brown;">---</span> Railroads</li> <li><span style="color: purple;">---</span> Historic Site</li> <li><span style="color: blue;">---</span> Delineated Streams</li> <li><span style="color: blue;">---</span> Other Streams</li> <li><span style="color: blue;">---</span> Delineated Wetlands</li> <li><span style="color: blue;">---</span> Delineated Ponds</li> <li><span style="color: purple;">---</span> Floodway</li> <li><span style="color: purple;">---</span> 100 Year Floodzone</li> <li> Traffic Signal</li> </ul>	<p><b>PRELIMINARY DESIGN FOR SLIGHT DETOUR ALTERNATIVE-REVISED</b></p> <p>Mapbook - Figure A2a</p>
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Figure A2c: Preliminary Design for Slight Detour Alternative-Revised



U-2719\_FONSI\_FigA\_PrelimDesignTOA1RevandTOA3Rev.mxd AKB 2018.03.30

 <p><b>I-440 IMPROVEMENTS FONSI</b></p> <p>STIP PROJECT NO. U-2719 Wake County, North Carolina</p>		<p>0 150 300 Feet</p> <p>Source: Wake County, NCDOT, ESRI, NCONEMAP NC Statewide Orthomagery</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: magenta;">---</span> Study Area Boundary</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Existing Noise Walls</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Existing Right of Way</li> <li><span style="border: 1px dashed orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Right of Way</li> <li><span style="border: 1px dashed orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Construction Easement</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Prop Easement Permanent Drainage</li> <li><span style="border: 1px dashed red; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Prop Easement Permanent Utility</li> <li><span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Bridges</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Paved Area</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Lane Lines</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Median Barrier</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Curb and Gutter</li> <li><span style="border: 1px solid magenta; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Retaining Wall</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Major Culverts</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Existing Power Towers</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Multi-Use Paths</li> <li><span style="border: 1px dashed green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Potential Greenway Relocation</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Proposed Greenway Removal</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Existing Greenways</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Parks</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Parcels</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Railroads</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Historic Site</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Delineated Streams</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Other Streams</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Delineated Wetlands</li> <li><span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Delineated Ponds</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Floodway</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> 100 Year Floodzone</li> <li> Traffic Signal</li> </ul>	<p><b>PRELIMINARY DESIGN FOR SLIGHT DETOUR ALTERNATIVE-REVISED</b></p> <p>Mapbook - Figure A2c</p>
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**Table A1: Impact Comparison - Hillsborough St and Wade Ave Interchange Area**

<b>U-2719 – I-440 Improvements Environmental Assessment</b>					
<b>Resource</b>	<b>Two Flyovers</b>	<b>One Flyover</b>	<b>One Flyover-Revised</b>	<b>Slight Detour</b>	<b>Slight Detour-Revised</b>
<b>SOCIAL RESOURCES IMPACTS</b>					
Right of Way Area from NCSU/Univ Club (Acres)	18.7	18.4	12.7	18.7	12.7
Right of Way Area from Meredith College (main campus + north of Wade Ave) (acres)	13.0 Main 0.0 North 13.0 Total	10.7 Main 6.2 North 16.9 Total	4.5 Main 6.2 North 10.7 Total	8.2 Main 5.9 North 14.1 Total	4.0 Main 6.2 North 10.2 Total
Residential Relocations	0	1	1	1	1
Business Relocations <sup>1</sup>	1	1	1	1	1
Public Parks and Greenways <sup>2</sup>	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway
Other (i.e. private recreational facilities, educational institutions, shopping centers)	Univ Club tennis courts and NCSU Golf Practice Facility	Univ Club tennis courts and NCSU Golf Practice Facility	Univ Club tennis courts and NCSU Golf Practice Facility	Univ Club tennis courts and NCSU Golf Practice Facility	Univ Club tennis courts and NCSU Golf Practice Facility
<b>CULTURAL RESOURCES IMPACTS</b>					
# of Historic Resources in Area	3	3	3	3	3
Historic Resources with “No Effect”	Royal Baking Co Capital City Lumber	Meredith College Royal Baking Co Capital City Lumber	Meredith College Royal Baking Co Capital City Lumber	Royal Baking Co Capital City Lumber	Royal Baking Co Capital City Lumber
Historic Resources with “No Adverse Effect”	Meredith College	0	0	Meredith College	Meredith College
Historic Resources with “Adverse Effect”	0	0	0	0	0
Section 4(f) Resources with anticipated <i>de minimis</i> Impact	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway	Museum Park Reedy Crk Greenway
<b>PHYSICAL RESOURCES IMPACTS</b>					
Utility Relocation/ Replacement	Electric Telephone Gas Water Sewer	Electric Telephone Gas Water Sewer	Electric Telephone Gas Water Sewer	Electric Telephone Gas Water Sewer	Electric Telephone Gas Water Sewer
Railroad Crossings	1	1	1	1	1

**Table A1: Impact Comparison - Hillsborough St and Wade Ave Interchange Area**

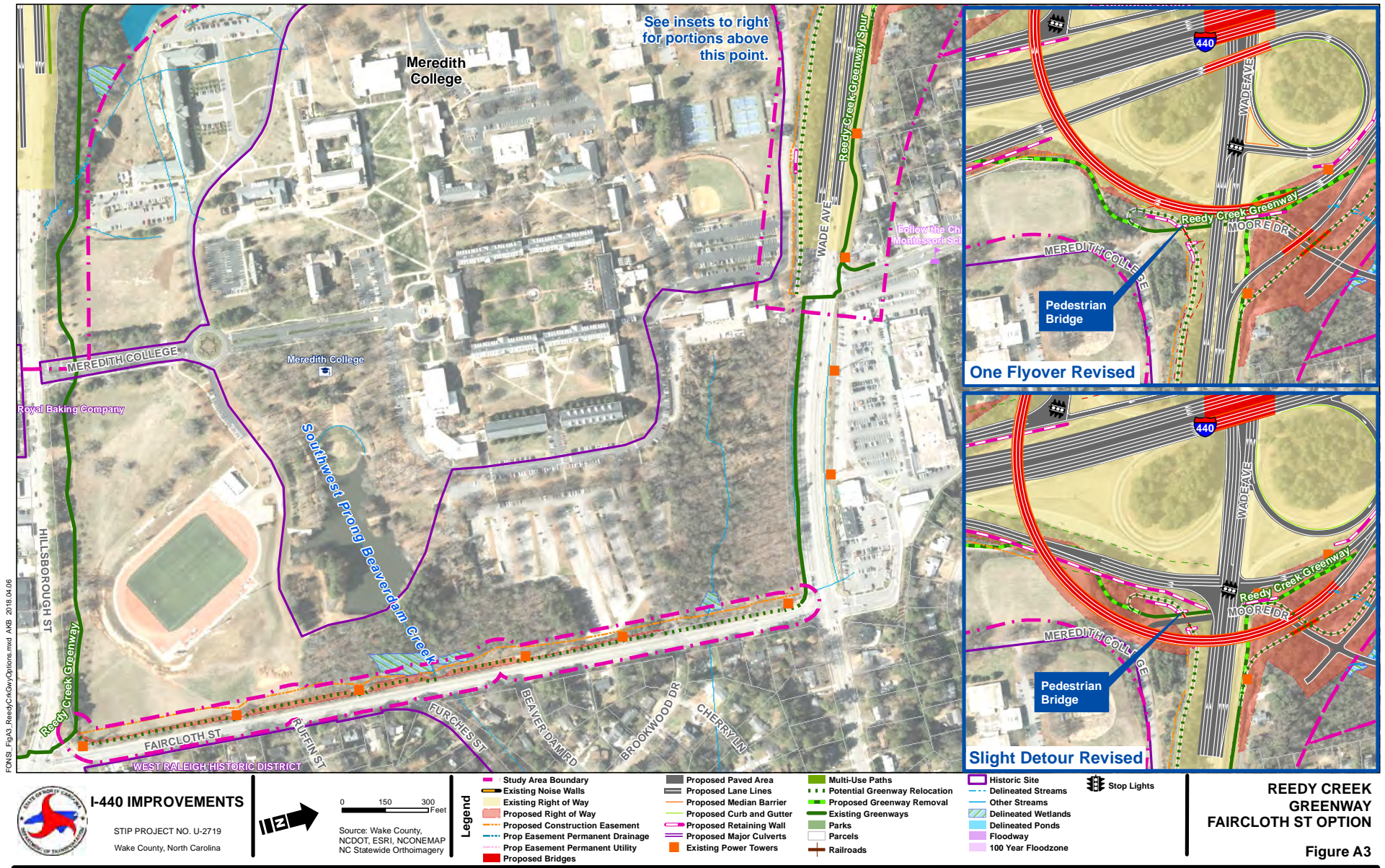
<b>U-2719 – I-440 Improvements Environmental Assessment</b>					
<b>Resource</b>	<b>Two Flyovers</b>	<b>One Flyover</b>	<b>One Flyover-Revised</b>	<b>Slight Detour</b>	<b>Slight Detour-Revised</b>
<b>NATURAL RESOURCES IMPACTS<sup>3</sup></b>					
Lakes/Ponds (sq ft) (Perm & Temp)	0	0	0	0	0
Wetlands (acres) (Perm & Temp)	0	0.08	0.08	0.07	0.07
<b>Intermittent Streams</b>					
Permanent Impacts (linear ft)	75	413	413	417	417
Temporary Impacts (linear ft)	25	24	24	25	25
<b>Perennial Streams</b>					
Permanent Impacts (linear ft)	628	542	542	544	544
Temporary Impacts (linear ft)	471	384	384	384	384
<b>Neuse River Riparian Buffer (Zone 1 + Zone 2)</b>					
Zone 1 Impacts (sq ft)	69,551	84,454	84,454	83,560	83,560
Zone 2 Impacts (sq ft)	46,713	57,578	57,578	55,647	55,647
<b>WATER RESOURCES IMPACTS</b>					
Floodplain and Floodway Crossings	1	1	1	1	1
# of Major Culverts/Pipes (>72" diameter)	3	2	2	2	2
<b>PROTECTED SPECIES IMPACTS</b>					
Michaux's sumac	No Effect	No Effect	No Effect	No Effect	No Effect
Red-cockaded woodpecker	No Effect	No Effect	No Effect	No Effect	No Effect
Northern long-eared bat (Div 5 projects are covered under a programmatic biological opinion)	May Effect/ Likely to Adversely Effect	May Effect/ Likely to Adversely Effect	May Effect/ Likely to Adversely Effect	May Effect/ Likely to Adversely Effect	May Effect/ Likely to Adversely Effect
Bald eagle	No impact	No impact	No impact	No impact	No impact

Note: Only features with impacts are listed in this summary table. Impacts based on preliminary design estimated construction limits plus 25 feet. Impacts assume Reedy Creek Greenway replaced along west side of Meredith College Main Campus.

1. It was assumed in the EA that the University Club would be a take in order to account for this possibility.
2. Impacts assume the Reedy Creek Greenway is constructed adjacent to I-440 on the main campus of Meredith College.
3. Jurisdictional stream impacts include Streams SAN, SAO, and SAP and Wetlands WD and WT.



Figure A3: Preliminary Design for Reedy Creek Greenway Faircloth Street Option





**Table A2: Impact Comparison - Reedy Creek Greenway Relocation Alternative**

<b>U-2719 – I-440 Improvements Environmental Assessment</b>			
<b>Resource<sup>1</sup></b>	<b>Adjacent to One Flyover-Revised</b>	<b>Adjacent to Slight Detour-Revised</b>	<b>Relocated to Faircloth St</b>
<b>SOCIAL RESOURCES IMPACTS</b>			
Right of Way Area impacts to Meredith College (acres) <sup>2</sup>	2.0 permanent easement	0.6 permanent easement	0.8 permanent easement 1.8 construction easement
<b>PHYSICAL RESOURCES IMPACTS</b>			
Utility Relocation/ Replacement	None	None	Electric power easement
<b>NATURAL RESOURCES IMPACTS</b>			
Lakes/Ponds (sq ft) (Perm & Temp)	0	0	0
Wetlands (acres) (Perm & Temp)	0	0	0.13
<b>Intermittent Streams</b>			
Permanent Impacts (linear ft)	0	0	0
Temporary Impacts (linear ft)	0	0	0
<b>Perennial Streams</b>			
Permanent Impacts (linear ft)	0	0	66
Temporary Impacts (linear ft)	0	0	28
<b>Neuse River Riparian Buffer (Zone 1 + Zone 2)</b>			
Zone 1 Impacts (sq ft)	0	0	8,544
Zone 2 Impacts (sq ft)	59	1,214	9,017

Note: Only features with impacts are listed in this summary table. Impacts based on preliminary design estimated construction limits plus 25 feet. Impacts assume Reedy Creek Greenway replaced along west side of Meredith College Main Campus.

1. Impact comparison is for impacts on Meredith College main campus and does not include the greenway section north of Wade Avenue, which would be the same under the Faircloth St option and the Adjacent to I-440 options.
2. Right of way impacts from the Faircloth St relocation option include 0.8 acre permanent easement within an existing permanent power easement along Faircloth St. The 1.8 acre construction easement includes 0.3 acre for the greenway segment south of Wade Ave, 1.3 acres along Faircloth St within the existing power easement and 0.2 acre outside the power easement.



# AGENCY CORRESPONDENCE

## B.1 NEPA/404 Merger Process Concurrence Forms

**Section 404/NEPA Merger Project Team Meeting Agreement  
Concurrence Point No. 1 - Purpose and Need**

Project No./TIP No./Name/Description:

Federal Project Number: IMSNHS-0440(10); WBS Number 35869.1.2  
 TIP Number: U-2719  
 Description: I-440 Improvements from US 1 south of Walnut Street (SR 1313) to north of Wade Avenue (SR 1728), Wake County

Purpose and Need of Proposed Project:

The purpose of the project is to improve traffic flow and operational efficiency and enhance mobility on this segment of I-440. The overall needs for the project are described below.

- The project section of I-440 consists of four through lanes, forming a "bottleneck," with six through lanes to the north and south. The four through lanes in the project section regularly experience congestion. Traffic volumes are forecasted to increase in the future.
- The roadway and interchanges in this section of I-440 have substandard design elements such as poor sight lines, narrow shoulders and medians, and short acceleration/deceleration lanes.
- Pavement, structures, and interchanges along the project segment are in need of rehabilitation.

The Project Team concurred on this date of 22 Aug 2015 with the purpose of and need for the proposed project as stated above.

USACE Eric Atley NCDOT Deborah Munn  
 USEPA Ken A. Z. USFWS Harry Jordan  
 NCDWQ Robert R. King NCWRC S. J. W.  
 NCDCR Renee Medhill-Easley FHWA Felix D. Silva  
 CAMPO C. M. J.

**Section 404/NEPA Merger Project Team Meeting Agreement  
Concurrence Point No. 2 – Detailed Study Alternatives**

Project No./TIP No./Name/Description:

Federal Project Number: IMSNHS-0440(10); WBS Number 35869.1.2  
 TIP Number: U-2719  
 Description: I-440 Improvements from US 1 south of Walnut Street (SR 1313) to north of Wade Avenue (SR 1728), Wake County

Detailed Study Alternatives for the Proposed Project:

The following are the Detailed Study Alternatives for the various elements of the project:

Mainline Best Fit Alignment  I-40 interchange Widen I-440 Only Southwest Quadrant Flyover  Jones Franklin Road interchange Braided Partial Clover  Athens Drive grade separation Replace Bridge in Place Replace Bridge to North	Melbourne Road half interchange Replace Bridge in Place Replace Bridge to North  Western Boulevard interchange Double Crossover Diamond  Ligon Street grade separation Traffic Culvert Two-Lane Bridge  Hillsborough Street/Wade Avenue interchanges One Flyover Two Flyovers Slight Detour
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The Project Team concurred on this date of 3/12/15 with the Detailed Study Alternatives for the proposed project as stated above.

USACE Eric Atley NCDOT Ann Williams  
 USFWS Cynthia F. Van Der Wiele 2015.03.24 12:22:44 -04'00'  
 USFWS Harry Jordan  
 NCDWQ Robert R. King NCWRC S. J. W.  
 NCDCR Renee Medhill-Easley FHWA Felix D. Silva  
 CAMPO C. M. J.



**Section 404/NEPA Merger Project Team Meeting Agreement  
Concurrence Point 2a - Bridging and Alignment Decisions**

**Project Name/Description:** Widen I-440/US1/64 from four lanes to six lanes from south of Walnut Street to north of Wade Avenue, reconstruct interchanges, replace structures, and repair pavement conditions. The project is entirely within Wake County.

**STIP Project:** U-2719 I-440 Improvement Project  
Federal Aid Project No. IMSNHS-0440(10)

Bridging Decisions

There are no existing bridges over water resources in the project corridor. This is a widening and interchange upgrade project and all stream crossings are proposed to be culvert extensions or replacements, with one new major culvert. The new major culvert is proposed for an unnamed tributary to Walnut Creek to pass under the proposed Denise Drive Extension that will reconnect Capital Center Drive to Jones Franklin Road.

Alignments of Preliminary Engineering Designs within the Detailed Study Alternatives

The alignments and typical sections of the preliminary engineering designs for the Detailed Study Alternatives presented in the Merger Team Meeting held 2/14/18 were reviewed. These included the preliminary designs presented in the EA (June 2017) for the Detailed Study Alternatives and revised preliminary designs prepared based on input from the EA public comment period. The revised designs are for the Hillsborough-Wade interchange area for the Slight Detour Alternative and the One Flyover Alternative, and preliminary design of an option for the Reedy Creek Greenway replacement along Faircloth Street.

The proposed designs and culverts were reviewed and accepted by the NEPA/404 Merger Team with no requested changes at the February 14, 2018 Merger Team Meeting.

The Merger Team has concurred on this date of 2/14/18 with the **Bridging and Alignment Decisions (CP 2a)** listed above for **STIP Project U-2719**.

USACE DocuSigned by:  
Eric C. H. Meyer  
A7A13C7833004C0

NCDOT DocuSigned by:  
Jamie Lancaster  
697382D9662A75E

USFWS DocuSigned by:  
Gary Jordan  
707B4E977C47D7D

SHPO DocuSigned by:  
Renee Hedrick-Earley  
C35A766A37E164

USEPA N/A

FHWA DocuSigned by:  
Felipe Davila  
71E7833A355074CD

CAMPO DocuSigned by:  
Chris Lukaszka  
75A2A8FA0138F05E

NCWRC DocuSigned by:  
Travis Wilson  
34685D0A025F436

NCDDWR DocuSigned by:  
Robert A. King  
80FD437C7738490

**Section 404/NEPA Merger Project Team Meeting Agreement  
Concurrence Point 3 – Least Environmentally Damaging Practicable Alternative**

**Project Name/Description:** Widen I-440/US1/64 from four lanes to six lanes from south of Walnut Street to north of Wade Avenue, reconstruct interchanges, replace structures, and repair pavement conditions. The project is entirely within Wake County.

**STIP Project:** U-2719 I-440 Improvement Project  
Federal Aid Project No. IMSNHS-0440(10)

The Merger Team has concurred on this date of April 16, 2018 that the following alternatives together comprise the **Least Environmentally Damaging Practicable Alternative** for **STIP Project U-2719**:

Location	Alternative
I-40 Interchange and south	Widen I-440 Only Alternative
Jones Franklin Road interchange	Upgrade Existing Partial Clover Alternative
Athens Drive grade separation	Replace Bridge in Place Alternative
Melbourne Road interchange	Replace Bridge in Place Alternative
Western Boulevard interchange	Double Crossover Diamond Alternative
Ligon Street grade separation	Build Bridge to North Alternative
Hillsborough Street and Wade Avenue interchange area	Slight Detour Alternative-Revised with Reedy Creek Greenway adjacent to I-440

USACE \_\_\_\_\_  
DocuSigned by:  
*E. A. Sawyer*  
87028C8F313D341D3

NCDOT \_\_\_\_\_  
DocuSigned by:  
*Jamie Lancaster*  
0A738F966A75E

USFWS \_\_\_\_\_  
DocuSigned by:  
*Bary Jordan*  
0016A0B720721E8

SHPO \_\_\_\_\_  
DocuSigned by:  
*Renee Steedhill-Earley*  
C06A579A37E46F

USEPA \_\_\_\_\_ N/A \_\_\_\_\_

FHWA \_\_\_\_\_  
DocuSigned by:  
*Felip Davila*  
C10FF33866C04C7

CAMPO \_\_\_\_\_  
DocuSigned by:  
*Ch X*  
75A74E42C38F07E

NCWRC \_\_\_\_\_  
DocuSigned by:  
*Travis Wilson*  
186A708B87797E

NCDWR \_\_\_\_\_  
DocuSigned by:  
*Robert King*  
00F0A35C7036400

**Section 404/NEPA Merger Project Team Meeting Agreement  
Concurrence Point 4a – Avoidance and Minimization Measures**

**Project Name/Description:** Widen I-440/US1/64 from four lanes to six lanes from south of Walnut Street to north of Wade Avenue, reconstruct interchanges, replace structures, and repair pavement conditions. The project is entirely within Wake County.

**STIP Project:** U-2719 I-440 Improvement Project  
Federal Aid Project No. IMSNHS-0440(10)

Avoidance and minimization measures for jurisdictional resources:

- Included retaining wall along westbound I-440 just west of Jones Franklin Road to avoid encroachment on Walnut Creek and its floodway and Wetland WK.
- Included retaining wall at the Jones Franklin Road interchange and proposed a slight offset in the ramp termini intersections with Jones Franklin Road to avoid encroachment on Lake Johnson Park and Walnut Creek and to minimize impacts to Wetland WL.
- Preliminary alternatives that encroached on Lake Johnson Park, Walnut Creek, and Wetland WL were eliminated from detailed study.

Avoidance and minimization measures for human environment resources:

- Revised designs of the Slight Detour Alternative-Revised includes retaining walls to reduce right of way impacts to Meredith College and University Club. On Meredith College's main campus, the commuter parking lot is avoided and impacts to the athletic field are reduced.
- Revised design of the Melbourne Road bridge from three lanes to two lanes at request of City of Raleigh to be more context-sensitive to the surrounding neighborhood. This change will be made during final design.
- Included retaining walls to avoid impacting existing noise walls located on cut slopes along southbound US 1/64 south of Walnut St and along westbound I-440 between Lake Boone Trail and Wade Avenue.
- Included retaining wall along westbound I-440 and the Melbourne Road off ramp to avoid impacting several apartment buildings.
- Included retaining wall along westbound I-440 at the historic Oak Grove Cemetery to avoid encroachment.
- Included retaining walls for the bridge approaches east of I-440 for the Ligon Street Build Bridge to North Alternative to minimize impacts to adjacent NCSU research facility and Method Townes townhome development.
- Will include down lighting at the Ligon Street bridge alternative in the final lighting plan to minimize light impact to NCSU greenhouses on both sides of I-440.
- Chose a best-fit alignment for the widening of I-440 that avoids encroaching on Kaplan Park, Method Community Park, the Berry O'Kelly School Historic District, and the historic Oak Grove Cemetery.
- Included a retaining wall at Museum Park to minimize encroachment onto this Section 4(f) resource.

Additional Measures:

No additional measures requested at the February 14, 2018 Merger Team meeting.

The Merger Team has concurred on this date of April 16, 2018 with the **Avoidance and Minimization Measures (CP 4a)** listed above for **STIP Project U-2719**.

USACE DocuSigned by:  
E.A. Mayon  
F033C0F833D0A13

NCDOT DocuSigned by:  
Jamie Lancaster  
F033C0F833D0A13

USFWS DocuSigned by:  
Bary Jordan  
01F8A7872D24E9

SHPO DocuSigned by:  
Renee Bledhill-Earley  
C35A795A37E8C7

USEPA N/A

FHWA DocuSigned by:  
Felipe Davila  
C118FF3336C04C7

CAMPO DocuSigned by:  
Ch. X.  
75A74F82C39F576

NCWRC DocuSigned by:  
Travis Wilson  
1185F70B5C7F131

NCDWR DocuSigned by:  
Robert King  
01F8A7872D24E9



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# AGENCY CORRESPONDENCE

## B2. Correspondence Regarding Historic Resources: Table of Contents

Date	Item	Page No.
<b>Correspondence included in the EA (June 2017)</b>		
8/13/12	Letter from NC HPO to NCDOT responding to the scoping letter request	B2-2
2/4/14	Letter from NC HPO to NCDOT regarding eligibility of sites for listing on the National Register of Historic Places (NRHP)	B2-3
9/26/14	Letter from NC HPO to NCDOT on additional review of eligibility of sites for listing on the NRHP	B2-4
5/21/15	Letter from NC HPO to NCDOT regarding eligibility of Meredith College for listing on the NRHP	B2-4
5/28/15	Letter from NCDOT to NC HPO regarding boundaries for the eligible portion of Meredith College	B2-5
5/2/17	Concurrence Form for Assessment of Effects	B2-6
<b>Correspondence after the EA</b>		
8/2/17	Letter from NC HPO to attorneys for Meredith College regarding Meredith College historic boundary	B2-7
9/7/17	Concurrence Form for Assessment of Effects	B2-9
12/19/17	Letter from attorneys for Meredith College to FHWA regarding consulting party status	B2-10
12/21/17	Letter from FHWA to attorneys for Meredith College regarding consulting party status	B2-11
12/29/17	Letter from attorneys for Meredith College to NC HPO regarding Meredith College historic boundary	B2-12
1/29/18	Letter from NC HPO to attorneys for Meredith College responding to 12/29/17 letter	B2-15
1/31/18	Email from attorneys for Meredith College to FHWA regarding Meredith College historic boundary and the Section 106 process	B2-17
3/2/18	Letter from attorneys for Meredith College to FHWA regarding Meredith College historic boundary and the Section 106 process	B2-18
3/5/18	FHWA requests advisory comments from the Advisory Council on Historic Preservation (ACHP) regarding effects determinations for Meredith College and the Section 106 process	B2-20
3/15/18	Letter from FHWA to NC HPO regarding Meredith College historic boundary	B2-21
3/19/18	Letter from ACHP to FHWA requesting additional review time	B2-23
4/2/18	Letter from ACHP to FHWA providing their advisory comments	B2-23
4/13/18	Letter from FHWA to Meredith College	B2-25
4/25/18	Letter from attorneys for Meredith College to FHWA regarding the Section 106 Process	B2-27
5/23/18	Letter from FHWA to Meredith College	B2-30



North Carolina Department of Cultural Resources  
State Historic Preservation Office

Ramona M. Bartos, Administrator

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

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

August 13, 2012

MEMORANDUM

TO: Leza Mundt and Jill Gurak  
Office of Human Environment  
NCDOT Division of Highways

FROM: Ramona M. Bartos *Ref for Ramona M. Bartos*

SUBJECT: Proposed Widening of I-440/US 1 from South of SR 1313 (Walnut Street) to North of SR 1728 (Wade Avenue), U-2719, Wake County, ER 12-1317

On July 26, 2012, we received notification from the State Clearinghouse concerning the above project.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

We have conducted a search of our maps and files and located the following structures of historical or architectural importance within the general area of this project:

- ◆ Meredith College Campus (WA 2502) Determined Eligible in 2004 and State Study List;
- ◆ Method Historic District (WA 4073), State Study List;
- ◆ Agricultural Building of the Berry O'Kelly School (WA 3481), Local Landmark; and,
- ◆ Saint James African Methodist Episcopal Church (WA 3482), Local Landmark.

We recommend that a qualified architectural historian identify and evaluate any structures over fifty (50) years of age within the project area, and report the findings to us. The last comprehensive architectural survey of Raleigh was completed in 1991, although more recent thematic and targeted area surveys may provide additional information.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Location: 109 East Jones Street, Raleigh NC 27601 Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617 Telephone/Fax: (919) 807-6570/807-6599

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Mary Pope Furr, NC DOT, [mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)  
State Clearinghouse





North Carolina Department of Cultural Resources  
State Historic Preservation Office  
Ramona M. Bartos, Administrator

Governor Pat McCrory  
Secretary Susan Klutz

Office of Archives and History  
Deputy Secretary Kevin Cherry

February 4, 2014

MEMORANDUM

TO: Megan Privett  
Office of Human Environment  
NCDOT Division of Highways

FROM: Ramona M. Bartos *Re: for Ramona M. Bartos*

SUBJECT: Historic Structures Survey Report, I-440 Beltline Improvements from Walnut Street to Wade Avenue, U-2719, Wake County, ER 12-1317

Thank you for your letter of December 20, 2013, transmitting the Historic Structures Survey Report for the above-referenced undertaking. We have reviewed the report and offer the following comments.

We concur that the **Royal Baking Company (WA2503)** remains eligible for listing in the National Register of Historic Places (NRHP) under Criterion A with the boundary as listed.

We concur that the **Berry O'Kelly School Historic District (WA6527)**, including the St. James AME Church (WA3482), Berry O'Kelly School Gymnasium (WA6479), Berry O'Kelly School Agricultural Building (WA3481) as contributing elements, is eligible for listing under Criterion A for its importance in the areas of education, ethnic heritage, and community development; Criterion C for the architecture of its surviving features, and under Criterion B for its association with Berry O'Kelly. The boundaries as shown appear appropriate.

We concur that the **Oak Grove Cemetery (WA6649)** is eligible for listing in the NRHP under Criteria A, C and D. A study of the cemetery could yield significant information concerning African-American mortuary customs and grave markers, especially if it was done in conjunction with the other African American cemeteries in Raleigh (Oberlin, City Cemetery, Mount Hope). Please note that the Table at the beginning of the description of Oak Grove Community Cemetery (page 54) shows the cemetery is eligible under criteria A, B & C, but the text says A, C and D. The boundaries appear appropriate.

We concur that the **Method Historic District (WA4073)** is not eligible for listing in the NRHP for the reasons outlined in the report.

Location: 109 East Jones Street, Raleigh NC 27601 Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617 Telephone/Fax: (919) 807-6570/807-6599

We are unable to concur that **Capitol City Lumber Company (WA6450)** is not eligible for listing in the NRHP. Because the description does not explain physical changes to the pre-1964 buildings and give the dates of those changes, the discussion of integrity is incomplete. When were exterior materials replaced or covered with new? How was fenestration changed and when? To what degree was the interior altered? It seems that this information could be gleaned through interviews and examination of documentary photos. Without more information, the extent and effect of the changes to the historic buildings are not clear. Further, the limited history seems to support the significance of the operation (supported "the local boom in post-war constructions when buildings materials were in short supply"; is the only surviving locally-owned lumber yard), but the evaluation of potential eligibility under Criterion A states that the company's association with Raleigh's post-war growth and industry are unexceptional. This property needs further investigation to reconcile these discrepancies.

Given that the **NCSU University Club (WA4626)** is fifty years old, we wonder why it is evaluated under Criterion Consideration G. While we would agree that the property overall and particularly the clubhouse does not appear to have sufficient integrity for eligibility, the integrity discussion does not address the numerous positive aspects of this property and that it may be of significance under Criteria A and C. Without contexts for recreation and architecture, a proper evaluation of its eligibility is not possible.

There is not enough information for a proper evaluation of the **Hillsdale Forrest Neighborhood (WA6526)**, especially Phase I. Based on the few photos provided, Phase I of the neighborhood, begun in 1962, appears to be rather intact. Construction dates from Wake County tax records would indicate whether there are too many noncontributing resources for the area to be eligible for the National Register. Without a better historic context, the statement that Hillsdale Forrest is "one of many residential subdivisions in Cary developed in the 1960s and 1970s as a result of the expansion of RTP" has little meaning. How many such neighborhoods are there from the early 1960s and how many are largely intact? Being one of many does not make the area ineligible. How does Phase I of the neighborhood one stack up in comparison to the others? If there are many such neighborhoods in Cary, eligibility would depend on a very high degree of integrity. Minus an expanded context and the author's comparing and contrasting Phase I of Hillsdale Forrest to the other 1960s neighborhoods, there is not enough information to make a final determination.

We look forward to your consideration of our above comments and welcome discussion of any points needing clarification. We will await the separate report on Meredith College once the access issues are resolved.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or [renee.gledhill-earley@ncdcr.gov](mailto:renee.gledhill-earley@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT



North Carolina Department of Cultural Resources  
State Historic Preservation Office

Governor Pat McCrory  
Secretary Susan Klutz

Ramona M. Bartos, Administrator

Office of Archives and History  
Deputy Secretary Kevin Cherry

September 26, 2014

MEMORANDUM

TO: Megan Privett  
Human Environment Unit  
NC Department of Transportation

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*  
Environmental Review Coordinator

SUBJECT: Addendum to Historic Structures Survey Report, I-440 Beltline Improvements, U-2719, Raleigh, Wake County, ER 12-1317

Thank you for your August 26, 2014, letter transmitting the above referenced addendum to the Historic Structures Survey Report for the above-referenced undertaking. We have reviewed the addendum and offer the following comments.

We concur that the **Capital City Lumber Company (WA6461)** is eligible for listing in the National Register of Historic Places under Criterion A for its strong associations with the post-World War II growth and development of Raleigh. The boundary as described appears appropriate.

We also concur that the **Hillsdale Forest Neighborhood (WA6526)** and **North Carolina State University Club (WA4626)** are not eligible for listing in the National Register for the reasons outlined in the report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact me at 919-807-6579 or [renee.gledhill-earley@ncdcr.gov](mailto:renee.gledhill-earley@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT [mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)

Location: 109 East Jones Street, Raleigh NC 27601 Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617 Telephone/Fax: (919) 807-6570/807-6599



North Carolina Department of Cultural Resources  
State Historic Preservation Office

Governor Pat McCrory  
Secretary Susan Klutz

Ramona M. Bartos, Administrator

Office of Archives and History  
Deputy Secretary Kevin Cherry

May 21, 2015

MEMORANDUM

TO: Mary Pope Furr  
Office of Human Environment  
NCDOT Division of Highways

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*  
Environmental Review Coordinator

SUBJECT: Historic Structures Architectural Report for Meredith College Campus, I-440 Improvements from Walnut Street to Wade Avenue, U-2719, Wake County, ER 12-1317

Thank you for your letter of April 24, 2015, transmitting the above-referenced report. Having reviewed the evaluation of the Meredith College Campus, we offer the following comments.

Despite the abbreviated access provided to the author, the photographic coverage and detailed building entries are impressively thorough. There is also a good college history and education context. However, the institutional architecture and landscape architecture contexts do not appear to adequately support the National Register evaluation and proposed boundaries.

The proposed boundaries are large, encompassing approximately 115 acres containing 34 primary buildings, with 16 built between 1966 and 1997, yet no argument for eligibility under Criteria Consideration G is presented. We doubt that a case for eligibility under Criterion C for architectural significance could be made as none of the post-1965 buildings appears to be exceptionally significant.

It is possible that a case for such large boundaries could be made based on landscape architecture significance, without claiming Criteria Consideration G, if the master landscape plan was developed in 1964, but there is little information about that plan beyond statements that Bell orchestrated the campus's gradual expansion. (Note: A pre-1965 date for the master plan is implied in comments about the amphitheater and lake, but the history of the campus states that the new master plan was announced in 1968.) No evidence or documentation of the master plan and its implementation is cited. Was the plan created prior to 1966 and was the post-1965 campus expansion done according to that plan? There is a bigger question that also must be answered: Is the plan significant simply because it was designed by Richard C. Bell? If the plan was designed after 1965, Criteria Consideration G would have to be supported for this area of significance as well.

Unstated in the report, the boundaries delineate a discontinuous district, with the 1966 equine center occupying the separated area to the north, across Wade Avenue. The report makes no case for the significance of this area, beyond stating that Bell and architect Ligon B. Flynn collaborated on its development and that horseback riding was popular with students.

Location: 109 East Jones Street, Raleigh NC 27601 Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617 Telephone/Fax: (919) 807-6570/807-6599

In light of these unanswered questions and the high number of unexceptional and large post-1965 buildings beyond the historic core of the campus, we concur that **Meredith College is eligible for listing in the National Register of Historic Places** under Criterion A for its role in the history of women's education in North Carolina and Criterion C for design/construction and landscape architecture, but that the appropriate boundaries should remain those of the 2004 determination of eligibility, with an extension to the south and southeast to pull in the entrance drive and the 1964 amphitheater and lake.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or [environmental.review@ncdcr.gov](mailto:environmental.review@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

May 28, 2015

Ms. Renee Gledhill-Earley  
Historic Preservation Office  
Department of Cultural Resources  
4617 Mail Service Center  
Raleigh, NC 27699-4617

Dear Ms. Gledhill-Earley:  
**ER 12-1317, TIP # U-2719, Eligibility Evaluation for Meredith College Campus (WA2502), Wake County**

Thank you for your letter of May 21, 2015 with your comments on the eligibility evaluation of the Meredith College Campus. While your office agrees with our consultant that the campus is eligible for the National Register of Historic Places under Criteria A and C, you did not concur with the boundaries recommended in the report. For planning purposes, I would like to clarify the boundaries you suggested in your response and ask that they be incorporated into your GIS system so that all parties are utilizing the appropriate boundaries. In your letter you proposed that the boundaries remain those of the 2004 determination of eligibility, with extensions to include the entrance drive, lake, and amphitheater. Currently on your GIS system, the 2004 boundaries bisect several campus buildings so I recommend the following boundary, derived from driving and walking paths to eliminate this confusion and incorporate only pre-1965 buildings in the campus core.

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1548 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

TELEPHONE: 919-707-8000  
FAX: 919-256-4224

WEBSITE:  
<https://connect.ncdot.gov/resources/Environment/Pages/default.aspx>

LOCATION:  
CENTURY CENTER BUILDING A  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC 27610





Please let me know if you have any further comments on this proposed boundary.

Sincerely,

Mary Pope Furr  
NCDOT Historic Architecture

Cc: John Williams, NCDOT, PDEA  
Derrick Weaver, NCDOT PDEA  
Craig Barfield, Meredith College

Federal Aid #: IMSNHS-044(10) TIP#: U-2719 County: Wake

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: I-440 Beltline Improvements from Walnut Street in Cary to Wade Avenue in Raleigh

On 5/2/2017 representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other

Reviewed the subject project and agreed on the effects findings listed within the table on the reverse of this signature page.

Signed:

5/2/2017  
Representative, NCDOT Date

5/2/2017  
FHWA, for the Division Administrator, or other Federal Agency Date

5/2/17  
Representative, HPO Date

Federal Aid #: IMSNHS-044(10) TIP#: U-2719 County: Wake

Property and Status	Alternative	Effect Finding	Reasons
Oak Grove Cemetery DE - Criteria A,C,D	Extended culvert	No adverse effect	Some earthwork required near the cemetery but no construction within the boundaries and does not alter the setting.
	Bridge north	No adverse effect	Bridge would be farther north than existing culvert, some earthwork required near the cemetery but no construction within the boundaries and does not alter the setting. NCDOT would work with community and HPO on aesthetic treatments to bridge.
	Bridge south	Adverse Effect	Visual impacts and potential noise impacts. Bridge closer to cemetery, some earthwork required near the cemetery but no construction within the boundaries, NCDOT would work with community and HPO on aesthetic treatments to bridge.
Berry O'Kelly School HD NR - Criteria A,B,C	All alternatives	No adverse effect	Addition of lanes and increased height of I-440 over railroad requires retaining wall, noise wall, and drainage structures along boundary of property, but not within. Temporary construction easement required to build the structures but no impacts to eligible resources within district. Noise wall will reduce current noise levels by 10-12 db. NCDOT will coordinate with community on appearance of back of noise wall (possible public art installation).
Capital City Lumber Company DE - Criterion A	All alternatives	No effect	No construction within the boundaries and does not alter the setting.
Royal Baking Company NR - Criterion A	All alternatives	No effect	No construction within the boundaries and does not alter the setting.
Meredith College Campus DE - Criteria A,C	All alternatives	No effect	Addition of lanes and gateway rerouting requires work along the edges of the campus property but does not require construction impacts within the historic boundary and does not alter the setting.

Initialed: NCDOT MPA FHWA MPA HPO BB  
 FHWA Intends to use the HPO's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f): N/A



North Carolina Department of Natural and Cultural Resources  
 State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper  
 Secretary Sun H. Hamilton

Office of Archives and History  
 Deputy Secretary Kevin Cherry

August 2, 2017

Stephen John Gurganus, AICP  
 Womble Carlyle Sandridge & Rice, LLP  
 555 Fayetteville Street, Suite 1100  
 Raleigh, NC USA 27601

[sgurganus@wcst.com](mailto:sgurganus@wcst.com)

RE: Addendum and Appendices to Historic Structures Survey Report for Meredith College Campus, Improvements to I-440 from Walnut Street to Wade Avenue, U 2719, Raleigh, Wake County, ER 12-1317

Dear Mr. Gurganus:

Thank you for your June 30, 2017, emails that attempted to transmit the above-referenced addendum and appendices which, due to technological limits, were hand-delivered to us the following week. We have reviewed the submitted materials and offer our comments.

As you know, we have concurred with the North Carolina Department of Transportation's determination that part of the Meredith College Campus (WA2502) is eligible for listing in the National Register of Historic Places under Criteria A for education and C for architecture. We also concurred with the eligible boundaries shown on their map of May 28, 2015, and corrected on our GIS March 3, 2017, to include the west quadrant of the circle at Johnston Hall (Map A).

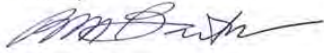
Having reviewed the addendum and appendices provided by you, we believe there is a case to be made for determining more of the campus eligible under Criterion C as a designed landscape by Richard C. Bell, a nationally recognized landscape architect. As documented in the addendum, Mr. Bell developed a Meredith College Master Plan in 1966, which was adopted by the Board of Trustees in 1968.

While recognizing that the Master Plan was to serve as a guiding principle for future campus development, we do not support the addendum's contention that the entirety of today's campus is eligible for listing in the National Register. This is due to substantial changes that have occurred since 1968 and introduced elements that are not in keeping with the adopted plan. These changes include, but are not limited to, the Athletic Field/Track Complex in the southeastern corner of the campus, the "Oaks Student Apartments" with its associated parking in the southwestern corner, and the several, large parking lots along the western side of West Campus Drive. Rather, we propose the boundaries shown on Map B that take into account the core of the Master Plan and changes to that core that more or less follow Bell's design.

Location: 109 East Jones Street, Raleigh, NC 27601 | Mailing Address: 4617 Mid-Service Center, Raleigh, NC 27609-4617 | Telephone/Fax: (919) 807-6530/(800) 699-

Should you have questions concerning the above, please do not hesitate to contact me at 919-807-6583 or [ramona.bartos@ncdot.gov](mailto:ramona.bartos@ncdot.gov). By copy of this letter, we also provide our findings to the Department of Transportation for their review and concurrence.

Sincerely,



Ramona M. Bartos

Enclosures – Maps A & B

cc: Dr. Kevin Cherry, SHPO  
Rodney Swink  
Mary Pope Furr, NCDOT

[kevin.cherry@ncdot.gov](mailto:kevin.cherry@ncdot.gov)  
[rodney.swink@att.net](mailto:rodney.swink@att.net)  
[mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)

Map A – Eligible boundaries of Meredith College Campus as of March 3, 2017, and shown in green on HPOWEB





Map B - Meredith College Campus eligible boundaries August 1, 2017 in red



Federal Aid #: IMSNHS-044(10)

TIP#: U-2719

County: Wake

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

*Project Description:* I-440 Beltline Improvements from Walnut Street in Cary to Wade Avenue in Raleigh – MEREDITH COLLEGE CAMPUS EXPANDED BOUNDARY (8/2/2017) The concurrence form for effects dated 5/2/2017 accurately records the recommendations for the other 4 historic properties in the APE.

On 8/22/2017 representatives of the

- North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- North Carolina State Historic Preservation Office (HPO)
- Other Meredith College VP- Craig Barfield

Reviewed the subject project and agreed on the effects findings listed within the table on the reverse of this signature page.

Signed:

Mary Pope 9/7/2017  
 Representative, NCDOT Date

Meredith C. Dorn 9/18/17  
 for FHWA, for the Division Administrator, or other Federal Agency Date

Renee Medkitt-Earley 9.7.17  
 Representative, HPO Date



Womble Bond Dickinson (US) LLP

555 Fayetteville Street  
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T 919.755.2100  
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Elizabeth L. Riley  
Partner  
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E-mail: Liz.Riley@wbd-us.com

womblebonddickinson.com

December 19, 2017

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

Mr. Clarence Coleman, P.E.  
North Carolina Division Federal Highway Administration  
310 New Bern Avenue, Suite 410  
Raleigh, NC 27601

Sent Via E-Mail and Hand Delivery

Re: Consulting Party Request for U-2719 Wake, I-440 Beltline  
Improvements from Walnut Street in Cary to Wade Avenue  
in Raleigh; Federal Aid #. IMSNHS-044(10)

Dear Mr. Sullivan and Mr. Coleman:

This firm serves as legal counsel to Meredith College. Not having been previously invited to be a Consulting Party for U-2719 Wake – I-440 Beltline Improvements, Meredith College requests to be formally designated as a Consulting Party.

Sincerely,

Womble Bond Dickinson (US) LLP

*Elizabeth L. Riley*  
Elizabeth L. Riley  
Partner

Womble Bond Dickinson (US) LLP is a member of Womble Bond Dickinson (International) Limited, which consists of independent and autonomous law firms providing services in the US, the UK, and elsewhere around the world. Each Womble Bond Dickinson entity is a separate legal entity and is not responsible for the acts or omissions of, nor can bind or obligate, another Womble Bond Dickinson entity. Womble Bond Dickinson (International) Limited does not practice law. Please see [www.womblebonddickinson.com/legal](http://www.womblebonddickinson.com/legal) notices for further details.  
WBD (US) 41286420v1

Federal Aid #: IMSNHS-044(10)

TRP#: U-2719

County: Wake

Property and Status	Alternative	Effect Finding	Reasons
Meredith College Campus- expanded boundary 8/2/2017 (DE, Criteria A&C)	One Flyover	No effect	CONDITION: NCDOT in consultation with Meredith College will develop a landscaping plan for western edge of campus where it abuts new ROW. Addition of lanes and gateway rerouting requires work along edges of the campus property but does not require construction impacts within the historic boundary. Does not alter the viewshed or the setting. Noise levels projected to increase by only 1-2 dBA.
	Two Flyovers	No adverse effect	CONDITION: NCDOT in consultation with Meredith College will develop a landscaping plan for western edge of campus where it abuts new ROW. Addition of lanes and gateway rerouting requires work along edges of the campus property but does not require construction impacts within the historic boundary. Does not alter the setting. Minimal impacts to the viewshed with flyovers. Noise levels projected to increase by only 1-2 dBA.
	Slight Detour	No adverse effect	CONDITION: NCDOT in consultation with Meredith College will develop a landscaping plan for western edge of campus where it abuts new ROW. Addition of lanes and gateway rerouting requires work along edges of the campus property but does not require construction impacts within the historic boundary. Does not alter the setting. Minimal impacts to the viewshed with ramp to Wade Ave, close to NW boundary. Noise levels projected to increase by only 3-4 dBA.

Initiated:

NCDOT *MPA* FHWA

HPO

FHWA intends to use the HPO's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

December 19, 2017  
Page 2



cc: Stephen John (Steve) Gurganus  
Land Planner, Womble Bond Dickinson (US) LLP  
([Steve.Gurganus@wbd-us.com](mailto:Steve.Gurganus@wbd-us.com))

Ms. Jill Gurak, P.E., AICP  
Director, National Planning Practice, Atkins Global  
([Jill.Gurak@atkinsglobal.com](mailto:Jill.Gurak@atkinsglobal.com))

Jamie Lancaster, P.E.  
Project Executive, Priority Projects Unit, NCDOT  
([jlancaster@ncdot.gov](mailto:jlancaster@ncdot.gov))

ELR:tms

WBD (US) 41286420v1



North Carolina Division 310 New Bern Avenue, Suite 410  
Raleigh, NC 27601  
(919) 856-4346  
December 21, 2017 (919) 747-7030  
<http://www.fhwa.dot.gov/ncdiv/>

In Reply Refer To:  
HDA-NC

Ms. Elizabeth L. Riley  
Partner  
Womble Bond Dickinson  
555 Fayetteville Street  
Suite 1100  
Raleigh, NC 27601

RE: Consulting Party Request for U-2719, I-440 Beltline Improvements from Walnut Street in  
Cary to Wade Avenue in Raleigh; Federal Aid #: IMSNHS-0440(10)

Dear Ms. Riley:

This is in response to your letter to Mr. John F. Sullivan and Mr. Clarence Coleman, dated  
December 19, 2017, concerning the above-referenced project. As requested, Meredith College is  
formally designated as a Consulting Party under Section 106 of the National Historic  
Preservation Act of 1966.

It is our understanding that Meredith College has been actively coordinated with due to  
anticipated right of way impacts to their property, including coordination under Section 106.  
Under Section 106, a No Effect determination has been rendered since none of the preliminary  
designs would directly impact the historic portion of Meredith College.

Sincerely,

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

cc: Ms. Renee Gledhill-Earley, SHPO  
Ms. Jamie Lancaster, PE, NCDOT  
Ms. Mary Pope Furr, NCDOT  
Mr. Steve Gurganus, AICP, Womble, Bond, Dickinson  
Ms. Jill Gurak, PE, AICP, Atkins





December 29, 2017

Ramona Bartos  
Administrator, State Historic Preservation Office  
North Carolina Department of Natural and Cultural Resources  
4617 Mail Service Center  
Raleigh, NC 27699-4617  
[ramona.bartos@ncdcr.gov](mailto:ramona.bartos@ncdcr.gov)

VIA EMAIL US MAIL AND

Re: Meredith College – 18315.0000.6

Womble Bond Dickinson (US) LLP

555 Fayetteville Street  
Suite 1100  
Raleigh, NC 27601

t: 919.755.2100  
f: 919.755.2150

Elizabeth L. Riley  
Partner  
Direct Dial: 919-755-2114  
Direct Fax: 919-755-6061  
E-mail: [Liz.Riley@wb-d-us.com](mailto:Liz.Riley@wb-d-us.com)

Dear Ms. Bartos:

Womble Bond Dickinson serves as legal counsel to Meredith College. I am writing to express continued concern regarding the constrictive designation by the North Carolina Historic Preservation Office of the eligible National Register boundary for the Meredith College Campus (WA2502). Your letter to Womble Land Planner Stephen (Steve) Gurganus of August 2, 2017, suggests a boundary that delineates less property than what the boundary should include. The consideration of the boundary by your office has persistently been an inappropriate *additive* process. We believe that process to be contrary to best practices for determining eligibility of this property and that the boundary should be expanded, as further set forth below.

In 2004, Edwards-Pitman Environmental prepared a report for Kimley-Horn and Associates on behalf of the North Carolina Department of Transportation for TIP Project U-4447. The report stated that (only) the Meredith College Quadrangle was eligible for the National Register of Historic Places under Criterion A and Criterion C. Meredith College was not invited to be a consulting party and had no input into the boundary delineation. However, in 2015, Fearnbach History Services stated that all of the north campus and most of the main campus should be considered eligible. Fearnbach excluded only margins on the east, west and south. While Fearnbach described the boundaries, she did not provide thorough justification, according to NC HPO. NC HPO, in coordination with NCDOT, greatly reduced the area of eligibility. Again, Meredith College was not invited to be a consulting party. Despite the expanded eligibility identified in the Fearnbach report, the College had no say in the boundary delineation.

In late 2016 and early 2017, Penne Sandbeck provided consultative review and a memo supplement to Meredith College, which was submitted by Mr. Gurganus to NC HPO on behalf of the College. NC HPO rejected Ms. Sandbeck's memo supplement and Mr. Gurganus's boundary figure as insufficiently documenting eligible resources to support a larger boundary. In late June 2017, additional material and justification was prepared by Penne Sandbeck, with Rodney Swink and Mr. Gurganus, which provided substantial documentation of eligibility for Meredith's campus under Criterion C as a designed historic landscape created by Richard C. Bell. The report included information about the Meredith College Campus master planning work

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December 29, 2017  
Page 2



of Charles Gillette, Richard Bell and others -- the Bell portfolio covering the entire main, and entire north, campuses to the property lines. The report proposed a boundary that included the entirety of the main campus. NC HPO disagreed and proposed a boundary that only expanded the boundary from the edge of the 2015 boundary. In each iteration of boundary proposed by NC HPO, the eligible boundary has simply grown outward from the core of the quadrangle through an additive process, which is inappropriate and contrary to National Register guidance for boundary determination.

*The appropriate starting point for considering and establishing a boundary is the entire campus, from which certain areas thereafter may be reduced or excluded.* The National Register Bulletin Defining Boundaries for National Register Properties ("Bulletin") reinforces such an approach that considers use and legal parcel boundaries (as documented in the June 2017 addendum and appendices) as the appropriate beginning for boundary consideration. Areas that have compromised integrity should be excluded *after* that assessment -- which the June 2017 report thoroughly documents. The Bulletin further supports the inclusion of setting and open space. Nancy J. Brown, FASLA, Advisory Council for Historic Preservation (ACHP) recently reiterated this approach during a December webinar entitled *Cultural Landscapes: Identification and Effects Assessment*, sponsored by the ACHP as part of the ACHP's Fall 2017 Section 106 Webinar Series. Thus, a *subtractive* process for determining the boundary, beginning with considering the whole, and excluding those areas and resources that lack integrity and/or significance, is the appropriate best practice and should be followed.

We have enclosed a memo supporting the subtractive approach, including a proposed boundary, from Meredith's consultant. We have also been in conversation with Mr. Charles Birnbaum of The Cultural Landscape Foundation (TCLF) who has indicated an interest in the Meredith campus as a designed historic landscape resource. Prior to his association with TCLF, Mr. Birnbaum coordinated the National Park Service Historic Landscape Initiative. He is a recognized expert not only on landscape history, but on the designation of historic landscapes. If additional expertise is needed, we are happy to bring Mr. Birnbaum to Raleigh to consult.

On behalf of Meredith College, we ask your Office to use the appropriate eligibility determination and to expand the historical boundary for the campus. We look forward to your response and quick resolution of this issue so that we may proceed to determining effects on the complete and proper eligible designed historic landscape resource.

Sincerely yours,

Womble Bond Dickinson (US) LLP

  
Elizabeth L. Riley  
Partner

ELR:tms

December 29, 2017  
Page 3



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Steve Gurganus  
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WBD (US) 41327929v1



**MEMORANDUM**

To: Craig Barfield, Vice President for Business and Finance, Meredith College

From: Mary Ruffin Hanbury, Hanbury Preservation Consulting

Cc: Elizabeth L. Riley, Partner, Womble Bond Dickinson  
Stephen J. Gurganus, Land Planner, Womble Bond Dickinson

Date: 20 December 2017

Re: Meredith College Campus, boundary for eligible National Register designation

-----

Steve Gurganus has provided me with the background material on your conversations to date with NCDOT and NC HPO concerning the National Register eligible boundaries of the Meredith College Campus, including reports and materials prepared by Heather Fearnbach, Penne Sandbeck, Rodney Swink and Stephen (Steve) Gurganus. As of August 1, 2017, NC HPO has proposed the boundary in the map below.



Map B - Meredith College Campus eligible boundaries August 1, 2017 in red

Associated HPO correspondence dated August 2, 2017 notes changes on campus since 1968 including but not limited to "The Athletic Field/Track complex in the southeastern corner of the campus, the "Oaks Apartments" with its associated parking in the southwestern corner, and several, large parking lots along the western side of West Campus Drive." These elements do compromise the integrity of the eligible resource.

However, an eligible boundary that excludes them but includes additional acreage on the north, northeast, and northwest sides of the campus, as well as a broader margin at the entrance drive and the walls and piers at the Hillsborough Street campus entrance is more appropriate and much more consistent with National Register guidance. The attached map (below) shows the suggested eligible campus boundary in red, and areas to be excluded from designation outlined in purple. The eligible boundary should include that portion of Meredith's historic entrance stone wall and columns, which now appears to be located on City of Raleigh right-of-way acquired in the 1990s as part of site plan approval by the City of Raleigh for new construction on Meredith's campus.

The proposed boundary follows guidance from The National Park Service's National Register Bulletin *Defining Boundaries for National Register Properties* that states, "Areas that have lost integrity because of changes in cultural features or setting should be excluded when they are at the periphery of the eligible resources." The Athletic Field/Track complex, the "Oaks

Meredith College Campus, boundary for eligible National Register designation, p. 2

Apartments," several parking lots along the western side of West Campus Drive, and a parking area off Faircloth on the eastern side of campus are at the periphery and should be excluded.

*Defining Boundaries for National Register Properties* continues, "Consider the historic use of the property when selecting the boundary. The eligible resource may include open spaces, natural land forms, designed landscapes, or natural resources that were integral to the property's historic use," and "[b]oundaries should include surrounding land that contributes to the significance of the resources by functioning as the setting [emphasis added]. This setting is an integral part of the eligible property and should be identified when boundaries are selected. For example, do not limit the property to the footprint of the building, but include its yard or grounds."

The entire campus must be the starting point for boundary delineation, including acknowledging the entire parcel's historic boundary, considering the historic use, and considering the setting integral to Meredith's master planned college campus. Mutually agreed upon noncontributing elements should then be excluded.

Meredith College Campus, boundary for eligible National Register designation, p. 3





**Proposed Meredith College Historic Boundary 12.20**

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Meredith College Campus, boundary for eligible National Register designation, p. 4

WBD (US) 41306140v2



**North Carolina Department of Natural and Cultural Resources**  
**State Historic Preservation Office**  
 Ramona M. Barros, Administrator

Governor Roy Cooper  
 Secretary Susi H. Hamilton

Office of Archives and History  
 Deputy Secretary Kevin Chery

January 29, 2018

Elizabeth L. Riley  
 Womble Bond Dickinson, LLP  
 555 Fayetteville Street, Suite 1100  
 Raleigh, NC 27601

[Liz.Riley@wbd-us.com](mailto:Liz.Riley@wbd-us.com)

RE: Historic Structures Survey Report for I-440 Improvements, U 2719, Wake County, ER 12-1317

Dear Ms. Riley:

Thank you for your December 29, 2017, letter, transmitted to us on the same date by email from Steve Gurganus and requesting reconsideration of our eligibility determination for Meredith College's campus for purposes of the National Register of Historic Places for the I-440 improvement project and the Section 106 process under the National Historic Preservation Act of 1966.

Our responsibility under Section 106 is to respond to a federal agency's determination that a property, in an undertaking's Area of Potential Effects, is either eligible for or not eligible for listing in the National Register of Historic Places (36 CFR § 800.4(c)(2)).

The most recent project is not the first time our office has reviewed the Meredith campus:

- In April 1992 following an architectural survey of Raleigh's post-1920s suburbs out to the 1988 city limits, the 1920s buildings on Meredith's campus were placed on the State Study List. Placement on the Study List indicates that a property appears to be eligible for listing in the National Register of Historic Places, pending additional study through the preparation of a National Register nomination.
- We next saw Meredith College as part of the project planning for the Hillsborough Street Improvements (U-4447). In response to this project, which included federal funding, Meredith College Quadrangle was determined to be eligible under National Register Criteria A (Event) for education and C (Design / Construction) for architecture on September 23, 2004. The boundary for Meredith College Quadrangle included "the buildings themselves and the rectangle of open space defined by their placement" (Edwards-Pittman survey report - August 2004).
- In December 2013, we received the Historic Structures Survey Report for the I-440 Beltline Improvements (U2719) and were alerted to the fact that Meredith College was not included in the report due to "issues of access to the property and research facilities" (transmittal letter - December 20, 2013).

Location: 109 East Jones Street, Raleigh NC 27601 | Mailing Address: 4617 Mail Service Center, Raleigh NC 27609-4617 | Telephone/Fax: (919) 867-6570/867-6599

Page 2

January 29, 2018

RE: Historic Structures Survey Report for I-440 Improvements, U-2719, Raleigh,  
Wake County, ER 12-1317

We received the eligibility evaluation for Meredith College Campus in April 2015 and responded May 15, 2015.

- In addition to responding to North Carolina Department of Transportation's (NCDOT) eligibility reports, per the regulations, we responded to the addendums and appendices to the report, submitted by Mr. Gurganus in January and June 2017 and agreed that a case could be made for a larger boundary than the one developed by NCDOT.

We reviewed these reports in accordance with 36 CFR § 800.4 – "Identification of Historic Properties" of the Advisory Council on Historic Preservation's regulations for implementing Section 106 of the National Historic Preservation Act. Our comments on the reports were provided in response to their submittal to us by the NCDOT, as delegated by the Federal Highway Administration (FHWA).

In each instance, we have agreed with NCDOT's opinion, on behalf of FHWA, that a *larger* boundary for Meredith College was appropriate. We have also agreed with your opinion that a *larger* area of the Meredith Campus *is eligible* for the National Register, but having applied the National Park Service's guidance, we did not agree that the entire campus is eligible and provided our reasoning for this opinion. That we responded to findings that, through no action on our part, added area to an eligible property seems to be what the regulations call upon us to do.

We based our recent determination that a larger boundary might be appropriate under National Register Criterion C (Design / Construction) as a designed landscape by Richard C. Bell and what the appropriate National Register-eligible boundaries would be, following the guidance provided by the National Register Bulletins "Defining Boundaries of National Register Properties" and "How to Evaluate and Nominate Designed Historic Landscapes" as well as the knowledge and expertise of our National Register staff. As you suggest in your December 29 letter, we did indeed use a "subtractive" process, and our conclusions align with the National Register bulletins' guidance. Additionally, Meredith College's consultants have only recently brought forward information regarding the 1960s-era Bell landscape design, which has just now reached the fifty-year threshold for the National Register, a circumstance that would not have been possible for eligibility consideration in earlier projects.

While FHWA has not formally noted their concurrence with our opinion about the eligible boundary, we presume from a review of initial design alternatives that they have agreed to the boundary that we provided to Mr. Gurganus in our letter of August 2, 2017.

36 CFR § 800.4(c)(2) provides that if FHWA and our office agree on eligibility, then *that* is the boundary that will be used for project planning. Based on your objections to that boundary, we suggest that you discuss this matter with the FHWA to confirm whether they are formally concurring with our eligibility determination or not. If not, then FHWA may obtain an official determination of eligibility from the Secretary of the Interior through the Keeper of the National Register's office under 36 CFR § 800.4(c)(2).

We would also like to clarify the State Historic Preservation Office's (HPO) role in the Section 106 process. We are not the decisionmaker in the process but rather a mandatory consulting party under 36 CFR 800.2(c)(1). The decision-making role is held by the federal agency responsible for funding, licensing, permitting or approving an undertaking that may affect historic properties. In this case, that agency is the FHWA, which has

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January 29, 2018

RE: Historic Structures Survey Report for I-440 Improvements, U-2719, Raleigh,  
Wake County, ER 12-1317

assigned responsibility for implementing some of the steps in the process to NCDOT, including the identification of historic properties and coordination with the HPO on those findings.

The regulations also provide for FHWA's consideration of the opinions of others and allowing them to participate in the process as consulting parties (36 CFR § 800.2 (c)(5) and 36 CFR § 800.3 (f)(3)). We would, therefore, encourage you to direct your questions and concerns to FHWA as a historic property owner that may be affected by the undertaking and to request consulting party status, if the College has not already done so.

Should you have further questions, please feel free to reach out to me at [ramona.bartos@ncdcr.gov](mailto:ramona.bartos@ncdcr.gov), or 919.807.6583. We appreciate your engagement on this issue.

Sincerely,



Ramona M. Bartos, Deputy  
State Historic Preservation Officer

cc: Kevin Cherry, SHPO  
Phillip H. Feagan, Esq.  
John Sullivan, FHWA  
Felix Davila, FHWA  
Mary Pope Furr, NCDOT  
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**From:** Gurganus, Steve [<mailto:Steve.Gurganus@wbd-us.com>]  
**Sent:** Wednesday, January 31, 2018 11:47 PM  
**To:** Davila, Felix (FHWA) <[Felix.Davila@dot.gov](mailto:Felix.Davila@dot.gov)>  
**Cc:** Riley, Liz <[Liz.Riley@wbd-us.com](mailto:Liz.Riley@wbd-us.com)>; Sullivan, John (FHWA) <[John.Sullivan@dot.gov](mailto:John.Sullivan@dot.gov)>; [jhopkins@ncdot.gov](mailto:jhopkins@ncdot.gov)  
**Subject:** RE: Meredith College eligible designed historic landscape boundary  
**Importance:** High

Felix –

In reference to NCHPO Deputy Administrator Ramona Bartos's recent letter, Meredith College does not agree with the delineated boundary for its eligible historic district, which is subject to effects and impacts by the U-2719 I-440 project.

Per Ms Bartos's letter, we are directing questions and concerns to FHWA as a historic property owner that may be affected by the undertaking, and as an only recently designated consulting party. Concerned about impacts to the college and its affected resources, Meredith inquired to NCHPO in May 2016 about additional data and assessment regarding the college's eligible historic district and the campus master plan created in the early to mid-1960's by Richard C. Bell. NCHPO conveyed to me (on Meredith's behalf) that NCDOT stated that it would conduct no further research on the significance of the Meredith campus despite NCHPO's comments about inadequate supporting data for a boundary proposed by architectural historian and consultant Ms Heather Fearnbach for NCDOT, but that Meredith College could do so itself if it so desired. Meredith submitted a memo that included additional data and assessment January 31, 2017, but NCHPO stated that that data, too, was insufficient. Meredith then commissioned and submitted an extremely detailed study late June 2017 of the 50-year old master plan created by Mr. Bell, including details of its implementation.

Meredith College does not agree with the quoted statement in Ms Bartos's letter that it limited access to the property or research facilities, and does not understand that statement. Architectural historian Fearnbach was escorted to any and every corner of the campus and buildings of this private institution that she wished to see, and she conversed extensively with college staff. Every effort was made to provide Ms Fearnbach with requested data. Most of the data in the supplement and appendix prepared by Meredith College, incidentally, was acquired from the North Carolina State University library, the University of Virginia library, and telephone interviews with the now octogenarian but still alert and cogent Mr. Richard C. (Dick) Bell who now resides at the coast, and not the property nor its research facilities.

NCDOT has coordinated extensively with Meredith College, particularly from a project footprint perspective. However, from the perspective of determining historic eligibility for its Designed Historic Landscape, and in determining effects by U-2719, Meredith was not a very involved party (notwithstanding that college vice president of business and finance, Craig Barfield, sat in on an August 22, 2017 effects determination meeting). The first effects determination form I requested and initially received was not executed. In December, I requested an executed copy of the form and received that form mid-December (executed September 7, 2017 by NCDOT and NCHPO, and on September 18, 2017 by FHWA). Meredith College was not party in any way to any follow up meetings, communication, or coordination regarding effects, which appears to have taken place in some form, anyway, after the August 22 meeting. I recently requested if there were any follow up meetings or communications, and I also requested any exhibits or supporting documentation regarding effects determination for the

eligible Meredith resources but have not received any beyond the official effects determination meeting forms for the May and August 2017 meetings.

This request regarding the boundary review by FHWA is not about Meredith College attempting to require major project redesign to avoid all impacts to its campus and eligible historic district resources, or about delaying, or about stopping the project. It is rather about ensuring that the boundary is accurately and reliably delineated, and effects appropriately minimized, mitigated, and/or resources otherwise enhanced, for the affected property (using NEPA terminology; but also considering and addressing potential adverse effects to an expanded eligible historic district boundary). Indeed, as a longtime NCDOT employee I understand the importance of keeping projects on schedule. We request that FHWA further review the supporting data for this matter, which I would like the opportunity to present to you. In addition, Meredith requests to be involved as a consulting party to all discussions regarding the Meredith eligible boundary, and effects thereto, moving forward.

Per Ms Bartos's recommendation for Meredith to inquire, does FHWA formally concur with NCHPO's eligibility (boundary) determination? If not, then we support elevation to the Secretary of the Interior through the Keeper of the National Register's office under 36 CFR § 800.4(c)(2).

I am also happy to meet and discuss this further from a procedural perspective. Meredith College desires to be party to consultation and agreement that will resolve the boundary and effects (should FHWA and the Keeper agree that the current boundary does not adequately delineate Meredith's eligible resource), to reach a meeting of the minds regarding all outstanding issues and concerns, and to move this project forward to implementation.

**Steve Gurganus, AICP**  
Land Planner  
Womble Bond Dickinson (US) LLP

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March 2, 2018

**VIA EMAIL AND HAND DELIVERY**

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

Mr. Clarence Coleman, PE.  
Preconstruction & Environment Director  
North Carolina Division Federal Highway Administration  
310 New Bern Avenue, Suite 410  
Raleigh, NC 27601

**Sent Via E-Mail and Hand Delivery**

**Re: Meredith College Section 106 process and Effects Determination -  
FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County**

Dear Mr. Sullivan and Mr. Coleman,

On behalf of Meredith College this letter serves to formally notify the Federal Highway Administration (FHWA), North Carolina Division (the "Agency") of the College's disagreement with, and objection to, certain of the Agency's actions in the above matter. The College contends that the Agency has failed to comply with Section 106, as described in 36 CFR 800, including (a) the identification and formal and timely inclusion of Meredith College as a consulting party of the Section 106 process, (b) the effects determination process and findings, and (c) documentation standards for **FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County**.

As an initial matter, while Meredith College has been in communication with the Agency, through the North Carolina Department of Transportation (NCDOT), for a number of months regarding the project footprint and potential greenway relocation, the College was not designated or treated as a consulting party regarding the delineation of the eligible historic boundary by the Agency as part of the 2015 Fearnbach "Meredith College Campus Evaluation." At its own initiation, the College was identified or designated a consulting party, consistent with 36 CFR 800 (800.3(f)), on or about December 21, 2017.

Further, after independently acquiring NCDOT historical architectural resources survey reports and boundary delineation correspondence between NCDOT and the North Carolina Historic Preservation Office (NCHPO), Meredith College provided extensive documentation -- at its own expense -- to NCHPO regarding the justification to expand the College's eligible historic boundary. NCHPO answered questions regarding required documentation and regarding the review criteria for revising the eligible historic district boundary (boundary revised August 2017). In December 2017, the College appealed the August 2017 boundary delineation to which FHWA had apparently not formally agreed. In February 2018, on behalf of the College, we requested that FHWA elevate the boundary delineation matter to the Keeper for review and decision.

Second, the College was not consulted with in a good-faith manner -- nor its agreement sought -- during effects determination consistent with 36 CFR 800 (800.8(c)). The College disputes

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March 2, 2018  
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that the effects determination process was consistent with 36 CFR 800 (800.5). The College has never been consulted with regarding other findings and determinations by the Agency. The College Vice President of Business and Finance, Craig Barfield, attended the follow-up effects determination meeting on August 22, 2017, as an observer. Mr. Barfield reported the following regarding that meeting (quote):

*I was merely an observer at the August 22 meeting along with John Williams from DOT. When we entered the meeting room, neither John nor I were acknowledged by the participants, who were already seated at a table. We sat in chairs that were lined against a wall in the same room.*

*At some point during the meeting a comment was made that someone from Meredith was present, and participants looked at me. At that point I was not acknowledged by name but only as someone from Meredith College. I was asked a single question, which was about Meredith's opinion on the alternatives. I replied that the Slight Detour alternative appeared to be the one with the least negative impact on Meredith.*

*When the meeting ended, no one acknowledged my presence, which didn't offend me, but which seemed to fit in with the understanding that the business was being handled by the people at the table.*

The August 2017 effects meeting was held subsequent to an original May 2017 effects determination meeting. The College was neither notified nor invited to the May 2017 meeting. Our law firm's Land Planner, Steve Gurganus, has been providing ongoing planning services to the College related to the project and also related to local development and other transportation matters proximate to the College. Mr. Gurganus was out of town the entire week of August 21<sup>st</sup> and was thus not able to attend the August 22 meeting with Mr. Barfield, nor did he have cell service in order to connect into the meeting. Our firm received an unexecuted copy of the effects determination "Concurrence form for Assessment of Effects" from John Williams on September 5, 2017 (enclosed). The enclosed email refers to additional comments and versions to which Meredith College was not privy.

NCDOT included a station with 3-D visualizations at the August 2017 public hearing. It is our understanding that only hard copy, 2-D plan or alternative sheets, were reviewed during the effects determination meeting. Mr. Barfield stated that no visualizations were presented or discussed at the August 22 effects determination meeting.

In December, upon request, Mr. Gurganus received an executed copy of the same effects determination concurrence form (though the table was not fully initialed). The form identified Mr. Barfield as an "attende" at the effects determination, followed by language that the representatives (including Mr. Barfield's name) "[r]eviewed the subject project and agreed on effects findings listed within the table on the reverse of this signature page." While Mr. Barfield was in attendance at the August 22 meeting, it is not accurate to state that Mr. Barfield "agreed to effects findings listed within the table..." He did not sign or initial any document indicating his agreement or concurrence. On September 8, 2017, the College submitted written comments on the Environmental Assessment (EA) and presented verbal testimony regarding impacts to the College and its eligible historic district at the August 8, 2017 NCDOT project open house, project presentations, and public hearing. Several comments regarding the project and its effects, effects to the College's eligible historic resources, and comments on the environmental document are included in those written comments



(enclosed). The College campus and eligible resources are also community resources in that the College regularly opens its campus and facilities for public use and enjoyment.

The effects determination refers to "ramps," but makes no reference whatsoever to the proposed two- to four-story steel and concrete flyovers that will either be immediately adjacent to a portion of campus that the College believes should be within the eligible historic boundary in the case of the One Flyover Alternative -- or actually on campus in the case of the Slight Detour Alternative. In the case of the One Flyover Alternative, the proposed flyover will be approximately 160 feet from the current eligible district, and in the case of the Slight Detour Alternative, approximately 30 feet from the current eligible district boundary. Both alternatives appear to virtually denude the entire approximate 3000-foot western edge of campus, and both alternatives insert highway infrastructure, and the concomitant noise, visual effects of trucks and traffic, and light poles and light masts (up to 100 feet tall), from one corner of the western edge of campus to the other.

The Slight Detour Alternative (as revised, discussed below), appears to reduce the 3000-foot impact to approximately 2000 feet. However, it is unclear whether the vegetation will be conserved in that area during construction. There was neither discussion nor any documentation of balloon tests to identify the proximity, levels, and heights of highway ramps, bridges, flyovers, and other infrastructure. The effects determination form does not document why the criteria of adverse effects were found inapplicable, other than three to six sentences per alternative describing the landscaping condition and, primarily, the absence of direct impacts. The College notes that the form does not distinguish between direct and indirect effects, does not adequately address indirect effects and completely ignores cumulative effects. There was apparently no discussion of indirect effects (notwithstanding a sentence regarding the viewshed), or the cumulative effects of the project. From a cumulative effects perspective, which customarily includes the effects of *all* past, present, and future actions, we are unaware of any discussion or documentation.

A multidisciplinary team comprised of an architectural historian; professor and practitioner of landscape architecture; and certified planner, NEPA practitioner, licensed North Carolina landscape contractor and certified horticulture professional, prepared the historic survey addendum and appendices submitted by the College in June 2017. There is no documentation of any multidisciplinary team review during effects determination on behalf of the Agency.

It is important to note here that the College is bounded by four roadways, each of which has taken campus land and reduced the size and integrity of the campus over time. The College also notes that relocating impacted facilities and resources (such as athletic facilities) as a result of the project will possibly result in future impacts to the existing eligible district -- an indirect impact.

During fall 2017, the College was advised that NCDOT was further studying the designs and was encouraged to be patient. After receiving final surveys, NCDOT met with the College on December 19, 2017, to present refined designs, which included reduced footprints for the two alternatives that NCDOT expected to carry forward in early 2018 project and merger meetings. The two alternatives at that meeting were the One Flyover Alternative and the Slight Detour Alternative. After inquiring on behalf of the College about a revised effects determination evaluation, Mr. Gurganus was informed that since the agencies had agreed that the previous, higher impacting, footprints resulted in either "No Effect" or "No Adverse Effect" (both subject to landscape conditions), there was no need to revisit the effects determination. In conclusion, the effects determination process is not consistent with 36 CFR 800.



On December 15, the College requested of NCDOT that Meredith be formally designated as a consulting party. After being informed by NCDOT that the College needed to submit its request to FHWA, we prepared and submitted an additional letter on behalf of the College on December 19 (enclosed). FHWA approved the College's request on December 21, 2017.

In January 2018, Mr. Gurganus viewed the 3-D visualizations at Atkins, NCDOT's consulting engineering firm in Raleigh. Mr. Gurganus thereafter prepared 2-D comparative visualizations that utilize Google Maps for the current campus condition (albeit a summer/evergreen view), versus the "winter" visualization (taken from the 2-D version of the NCDOT YouTube visualizations). The "winter" versions, nevertheless, appear to show less existing vegetation than is actually visible on the campus during the winter months. The 2-D visualizations were "captured" from the NCDOT website (<https://www.ncdot.gov/projects/i-440improvements/august-2017-hearing.html>). The enclosed 2-D figures (for the One Flyover and Slight Detour Alternatives) are best viewed using a larger screen desktop computer so that they can be enlarged and dragged side-to-side for comparison purposes.

Ultimately, while Meredith College believes that the footprint reductions are helpful, the College submits that effects were, and remain, adverse. On behalf of the College as a formal consulting party, we urge more thorough consideration of project effects. One form, with no supporting documentation, as acknowledged by NCDOT itself, does not seem to be an adequate method to assess and document project effects. See, 36 CFR 800.8(c) and 800.11(e). The College has not yet been made privy to any supplement of the EA, nor to a Draft FONSI or ROD, either or both of which the College has requested to review,

In conclusion, we ask that FHWA respond to the following questions:

1. Have the Agency and/or NCHPO not seen visualizations similar to the enclosed as part of project effects determination and environmental documentation review? If FHWA or NCHPO have seen similar visualizations, then we question why they were not presented at the effects determination meeting that Mr. Barfield attended, or afterward, including when Meredith was finally officially designated a consulting party on December 21, 2017. If not, we question how the effects can be considered adequately assessed, and respectfully question the validity of the effects determination.
2. Have the Agency and/or NCHPO not seen visualizations from the perspective of being at the NW edge of the currently eligible district at the effects determination meeting -- or afterward? If they have been viewed, then we respectfully question the validity of the effects determination.
3. Have neither FHWA and/or NCHPO seen on-site balloon tests regarding the visibility of the different levels of ramps, bridge, flyovers and other infrastructure, including assessing the impacts of the flyovers on the eligible district? If balloon tests have been conducted, Meredith has not been a party to such evaluations. If balloon tests have been conducted and viewed, then we respectfully question the validity of the effects determination.
4. Can FHWA confirm that FHWA and NCHPO effects determination assessment did not include professionals with training and experience in delineating and assessing impacts to historic cultural landscapes, landscape architecture, horticulture, and

March 2, 2018  
Page 5



landscape construction? The College respectfully reminds the Agency that the resource is a cultural landscape; the scope and relevancy of the Designed Historic Landscape district far exceed that of the building footprints and immediate surrounding setting. If multidisciplinary professionals were part of the effects determination team, such professionals were not documented. If multidisciplinary professionals were not part of the effects determination team, such failure would constitute additional grounds upon which we respectfully question the validity of the effects determination.

As noted above, Meredith College asks that FHWA request that the Keeper review the eligible boundary for the College's Designed Historic Landscape. Meredith College further appeals in the strongest possible way the procedures, as well as the substance, of the Section 106 process and effects determination for TIP U-2719. Should the outcome of this request indicate the likelihood of adverse effects, the College stands prepared to enter into a Memorandum of Agreement process to address and attempt to satisfactorily resolve such effects.

Sincerely,

**Womble Bond Dickinson (US) LLP**

*Elizabeth L. Riley*

Elizabeth L. Riley  
Partner

Enclosures

Cc (by email):

Dr. Jo Allen, President, Meredith College  
Craig Barfield, Vice President, Business & Finance, Meredith College  
Ramona M. Bartos, Administrator, State Historic Preservation Office  
Felix Davila, Preconstruction & Environment Engineer, FHWA  
Renee Gledhill-Earley, Environmental Review Coordinator, State Historic Preservation Office  
Mary Pope Furr, Historic Architecture Team Lead, NCDOT  
Mary Ruffin Hanbury, Hanbury Preservation Consulting  
Jill Gurak, PE, Director, National Planning Practice, Atkins Global  
Steve Gurganus, Land Planner, Womble Bond Dickinson (US) LLP  
Jamie Lancaster, PE, Priority Projects Unit, NC Department of Transportation  
Marjorie Spivak, Partner, Womble Bond Dickinson  
Sarah Stokely, Program Analyst, Advisory Council on Historic Preservation  
Rodney Swink, Landscape Architect and Professor of the Practice

**From:** [Clarke, David \(FHWA\)](#)  
**To:** [Sarah Stokely - Coleman, Clarence \(FHWA\)](#)  
**Subject:** FW: Meredith College Section 106 process and Effects Determination - FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County  
**Date:** Monday, March 05, 2018 11:59:50 AM  
**Attachments:** [imagecde8a5.PNG](#)  
[image19de5d.PNG](#)  
[image020a38.PNG](#)  
[imagec8f007.PNG](#)  
[Meredith\\_One\\_Flyover\\_Existing\\_Visualization\\_CALLOUT.pdf](#)  
[Meredith\\_Slight\\_Detour\\_Existing\\_Visualization\\_CALLOUTS.pdf](#)  
[NCDOT\\_FHWA\\_Effects\\_Determination\\_Sec\\_106\\_Effects\\_Final.pdf](#)

Sarah,

Per the below email and attached documents, FHWA is requesting ACHP review of this effect determination pursuant to 36 CFR 800.5(c)(2)(i). I know there has been some confusion as to the letter from Meredith College going to FHWA and copying in ACHP and multiple phone calls and emails. So, this email should clear things up a bit procedurally. Please let me know if you have any questions or require further information.

Thanks,

David S. Clarke  
Federal Preservation Officer  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, DC 20590  
(202) 366-2060  
[david.clarke@dot.gov](mailto:david.clarke@dot.gov)

---

**From:** Sarah Stokely [<mailto:sstokely@achp.gov>]  
**Sent:** Monday, March 05, 2018 8:49 AM  
**To:** Clarke, David (FHWA) <[david.clarke@dot.gov](mailto:david.clarke@dot.gov)>  
**Subject:** FW: Meredith College Section 106 process and Effects Determination - FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County

---

**From:** Gurganus, Steve [<mailto:Steve.Gurganus@wbd-us.com>]  
**Sent:** Friday, March 02, 2018 7:01 PM  
**To:** [john.sullivan@dot.gov](mailto:john.sullivan@dot.gov); [clarence.coleman@dot.gov](mailto:clarence.coleman@dot.gov)  
**Cc:** Davila, Felix (FHWA) ([Felix.Davila@dot.gov](mailto:Felix.Davila@dot.gov)); Jo Allen ([president@meredith.edu](mailto:president@meredith.edu)); Craig M. Barfield ([craigb@meredith.edu](mailto:craigb@meredith.edu)); Mary Pope Furr; Mary Ruffin Hanbury ([maryruffin@hanburypreservation.com](mailto:maryruffin@hanburypreservation.com)); Gurak, Jill S ([Jill.Gurak@atkinglobal.com](mailto:Jill.Gurak@atkinglobal.com)); Lancaster, Jamie J; Spivak, Marjorie; Sarah Stokely; Rodney Swink ([rodney.swink@att.net](mailto:rodney.swink@att.net)); Riley, Liz; Cooke, John  
**Subject:** Meredith College Section 106 process and Effects Determination - FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County



Please see the attached letter from firm attorney Liz Riley. Hard copy forthcoming to FHWA and NCHPO. I attach the comparative visualization that I prepared as a separate attachment for purpose of preserving document detail.

Sincerely,

**Steve Gurganus, AICP**  
Land Planner  
Womble Bond Dickinson (US) LLP

d: 919-755-2141  
m: 919-612-3452  
e: [Steve.Gurganus@wbd-us.com](mailto:Steve.Gurganus@wbd-us.com)

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North Carolina Division

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March 15, 2018

In Reply Refer To:  
HDA-NC

Ms. Ramona Bartos  
Administrator  
North Carolina Department of Cultural Resources  
4617 Mail Service Center  
Raleigh, NC 27699-4617

RE: Meredith College Historic Boundary, U-2719, I-440 Beltline Improvements from Walnut Street in Cary to East of Wade Avenue in Raleigh; Federal Aid #: IMSNHS-0440(10)

Dear Ms. Bartos:

The purpose of this letter is to state our agreement with the boundary for that part of Meredith College Campus eligible for listing in the National Register of Historic Places that your office proposed in the Map B enclosure of your August 2, 2017-letter to Mr. Steve Gurganus. Mr. Gurganus, who works with Womble, Bond, Dickinson and represents Meredith College, sent a January 31, 2018-email to Mr. Felix Davila that requested Federal Highway Administration (FHWA) review the proposed boundary for Meredith College.

We collected and reviewed information that Womble, Bond, Dickinson submitted to both of our respective offices for the subject project regarding the historic boundary and determination of effects. We met with your office on February 13 to ensure that we had all submitted information. We coordinated review of the documentation with the FHWA Federal Preservation Officer (David Clarke). Based on our review of material provided, the FHWA agrees with the proposed boundary in the Map B enclosure to your August 2, 2017-letter to Mr. Gurganus. We have attached the Map B enclosure to this letter.

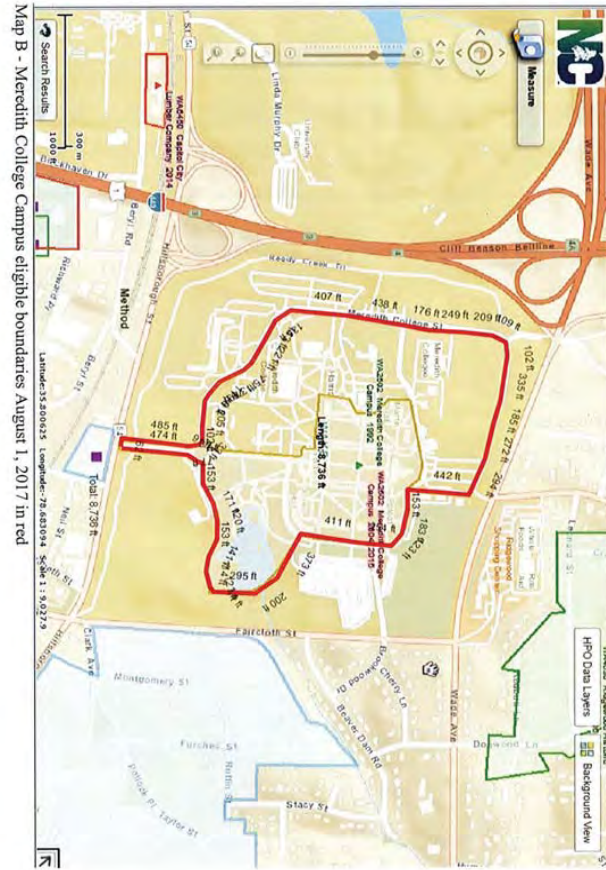
If you any questions or comments, please contact Clarence Coleman, Preconstruction and Environment Director, at 919-747-7014 or via email at [Clarence.Coleman@dot.gov](mailto:Clarence.Coleman@dot.gov).

Sincerely,

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

Enclosure

cc: Ms. Renee Gledhill-Earley, SHPO  
 Ms. Jamie Lancaster, PE, NCDOT  
 Ms. Mary Pope Furr, NCDOT  
 Ms. Jill Gurak, PE AICP, Atkins  
 Mr. David Clarke, FHWA Office of Planning, Environment, and Realty  
 Mr. Steve Gurganus, AICP, Womble, Bond, Dickinson  
 Mr. Craig Barfield, Meredith College





Preserving America's Heritage

March 19, 2018

Mr. Clarence W. Coleman, P.E.  
Preconstruction and Environment Director  
Federal Highway Administration  
310 New Bern Avenue, Suite 410  
Raleigh, North Carolina 27601

Mr. David S. Clarke  
Federal Preservation Officer  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Ref: *Disputed Effect Finding for I-440 Improvements Project  
Wake County, North Carolina*

Dear Mr. Coleman and Mr. Clarke:

On March 5, 2018, the Advisory Council on Historic Preservation (ACHP) received correspondence regarding the referenced undertaking from the Federal Highway Administration (FHWA). As we understand, the FHWA has requested the ACHP's comments in accordance with Section 800.5(c)(2) of our regulations "Protection of Historic Properties" (36 C.F.R. Part 800), which implement Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. 306108). This provision resolves disputes between the Federal agency and consulting parties regarding the finding of effect made by the agency. In this particular case, Meredith College, a consulting party and a local historic women's college located in Wake County, North Carolina that will be affected by the undertaking, has filed the dispute for the agency's finding of No Adverse Effect.

In accordance with Section 800.5(c)(3) of our regulations, the ACHP may request an additional 15 days to review the dispute, so long as the request is made prior to the end of the initial 15-day review period. The ACHP is requesting this extension to develop our advisory comments in a manner that provides clear and concrete information to FHWA regarding its application of the "Criteria of Adverse Effect" to the effects of the undertaking on Meredith College.

The ACHP will submit our comments to the FHWA by April 2, 2018. In the meantime, if you have any questions, please contact Ms. Sarah Stokely at (202) 517-0224 or via email at [ssokely@achp.gov](mailto:ssokely@achp.gov).

Sincerely,

Charlene Dwin Vaughn, AICP  
Assistant Director, FPLAS  
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION  
401 F Street NW, Suite 308 • Washington, DC 20001-2637  
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Preserving America's Heritage

April 2, 2018

Clarence W. Coleman, P.E.  
Preconstruction and Environment Director  
Federal Highway Administration  
310 New Bern Avenue, Suite 410  
Raleigh, North Carolina 27601

David S. Clarke  
Federal Preservation Officer  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Ref: *Disputed Effect Finding for I-440 Improvements Project  
Wake County, North Carolina*

Dear Mr. Coleman and Mr. Clarke:

On March 5, 2018, the Federal Highway Administration (FHWA) informed the Advisory Council on Historic Preservation (ACHP) that Meredith College, a local historic women's college in Wake County, North Carolina, had recently disputed FHWA's No Adverse Effect finding for the proposed I-440/US I-64 Improvements Project located south of Walnut Street in the Town of Cary to east of Wade Avenue in the City of Raleigh, North Carolina. FHWA had determined that the No Adverse Effect finding is appropriate and received the concurrence from the North Carolina State Historic Preservation Officer (SHPO) on September 7, 2017. In light of the dispute, FHWA has requested the ACHP to provide its advisory comments regarding this dispute in accordance with Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C. 306108) and 36 CFR Part 800.5(c)(2)(i) of our regulations, "Protection of Historic Properties."

In addition to FHWA's request for our advisory comments, on February 7, 2018, the law firm Womble, Bond, Dickinson, on behalf of Meredith College, contacted the ACHP via e-mail and requested that the ACHP enter the Section 106 consultation for this undertaking given several unresolved issues raised by Meredith College. In addition, the ACHP received a copy of the letter to FHWA in which the law firm expressed concerns regarding the agency's failure to comply with the requirements of Section 106. The primary concerns that were raised by the law firm, on behalf of Meredith College, included the following: 1) the need for FHWA to expand the boundaries of Meredith College, a property determined eligible for the National Register of Historic Places (NRHP), so that FHWA could appropriately consider the direct, indirect and cumulative effects; 2) the failure of FHWA to consult with Meredith College in a good faith manner; and 3) the need for a more thorough consideration of the effects of the project alternatives on the Meredith College campus.

Documentation provided by FHWA, NCDOT, and the SHPO evidences that Meredith College was

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involved in the Section 106 consultation process as a member of the Advisory Committee established in 2013. Further, FHWA and NCDOT are continuing to collaborate with Meredith College as they refine the alternatives for the I-440 Improvement Project. Based upon the documentation included in the I-440 Improvement Project's Environmental Assessment, published on June 2017, it is apparent that Meredith College participated in the Section 106 review, although it may not have been officially recognized as a consulting party in accordance with 36 CFR Section 800.3(f)(3) until a written request was submitted to FHWA in December 2017. In the article published in the *News and Observer* newspaper on March 26, 2018, NCDOT is recognized for having revised plans to widen the Beltline in West Raleigh so that Meredith College and the NC State University Club will lose less land in the reconfigured interchanges at Hillsborough Street and Wade Avenue. Meredith College's Vice President, Craig Barfield, is quoted as stating that "We're pleased that they've worked to reduce the impact to us. The DOT folks have been good about keeping us in touch. They've heard us; they've been listening to us." It, therefore, is the ACHP's opinion that the FHWA and NCDOT have provided evidence that Meredith College was engaged as a consulting party and afforded the rights and privileges outlined in the 36 CFR Part 800.

With regard to the request for an expansion of the boundaries for the Meredith College, the ACHP was advised that FHWA and the SHPO reached a consensus determination of effect (DOE) for the college's historic district. FHWA re-evaluated and confirmed the college's eligibility for the NRHP under Criteria A and C, and SHPO concurred on May 21, 2015. Meredith College was originally determined eligible for the NRHP in 2004. The records indicate that the college was founded in 1891, and moved to its current location in 1926.

In 2015, the SHPO did not agree with the expanded boundaries proposed for the historic district due to the lack of information supporting certain components of the 1968 Master Plan prepared by the landscape architect Richard C. Bell. The SHPO, FHWA, and NCDOT consulted further between 2015 through 2018 regarding the expansion of the historic boundary with SHPO recommending that the boundary should remain the same as determined in the 2004 NRHP eligibility except with an extension to certain sections in the southern portion of the campus that recognized the growth of the campus in the mid-to-late 20<sup>th</sup> century. In 2017, the law firm Womble, Bond, Dickson, acting on behalf of Meredith College, sent letters and additional documentation to FHWA, NCDOT and SHPO supporting an expanded historic boundary for the entire Meredith College Campus based on the Richard C. Bell 1968 Master Plan.

In August 2017, the SHPO responded to the law firm that it agreed that more of the campus should be determined eligible under Criterion C as a designed landscape by Richard C. Bell. However, the SHPO continued to disagree with a proposal that the entire campus should be determined eligible due to substantial changes that occurred to the campus since 1968, and the introduction of new structures and buildings to the campus. On March 15, 2018, the ACHP understands that FHWA notified the SHPO that it concurred with the revised boundaries for Meredith College that the SHPO proposed in its August 2, 2017 letter to Womble, Bond, and Dickinson. As such, it is the ACHP's opinion that for the purposes of Section 106 this consensus DOE is consistent with 36 CFR Section 800.4(c)(2), and no further evaluation is required by the Keeper of the National Register of Historic Places.

As the ACHP understands, the proposed alternatives for the Hillsborough Street and Wade Avenue Interchange Area would directly impact Meredith College. The college's main campus is located east of I-440 between Hillsborough Avenue and Wade Avenue, with additional land north of Wade Avenue. The existing right-of-way along I-440 in this area is not sufficient to construct the new interchange designs. Right-of-way impacts to the main campus of Meredith College will vary by alternative, and may not all will have an effect on contributing properties to the historic district. The One Flyover Alternative would require approximately 10.7 acres for new right of way, the Two Flyovers Alternative would require approximately 13.0 acres for new right of way and the Slight Detour Alternative would require approximately 8.2 acres of new right of way (I-440 Improvements Environmental Assessment, page 3-7).

In this area of campus, the College's commuter parking lot and a general athletic field would be partially impacted to varying degrees by each Detailed Study Alternative; with the Slight Detour Alternative having the least impact and the Two Flyovers Alternative the most.

To assess whether the undertaking's effects would be adverse, FHWA developed and presented visualizations of the alternatives. Based on this assessment, FHWA determined that a finding of No Adverse Effect would be appropriate based on four factors: (1) NCDOT, in consultation with Meredith College, will develop a landscaping plan for the western edge of campus where it abuts new right of way; (2) additional lanes and greenway rerouting requires work along edges of the campus property but does not require construction impacts within the historic boundary; (3) all three alternatives do not alter the view shed or the setting; and (4) the projected noise levels for all three alternatives would only increase by 4 dBA maximum. On August 8, 2017, this No Adverse Effect finding with conditions was presented to representatives for NCDOT, FHWA, SHPO, and Mr. Barfield of Meredith College. NCDOT, FHWA, and SHPO all concurred with the No Adverse Effect finding in September 2017, and did not learn about Meredith College's objection until after the 30-day review period. Meredith College has objected to the No Adverse Effect finding because the undertaking will substantially change the setting, feeling and association of the historic college, in particular the historic Master Plan prepared by Richard C. Bell.

In the documentation submitted to the ACHP, the FHWA and NCDOT identified and evaluated the significance, the character defining elements, and the integrity of Meredith College. FHWA made the finding of No Adverse Effect because the proposed project will not alter the qualifying characteristics or further compromise the historic integrity of this historic property. The ACHP's advisory opinion, therefore, is that FHWA properly applied the Criteria of Adverse Effect as outlined in 36 CFR Section 800.5(a) of our regulations. The agency concluded that the proposed undertaking, which is still being refined by FHWA and NCDOT, will not alter the character defining elements or the integrity of this historic property. Furthermore, pursuant to Section 800.13(b) of our regulations, *if historic properties are discovered or unanticipated effects on historic properties are found after the agency has completed the Section 106 process without establishing a process under Section 800.13(a), the agency shall make reasonable efforts to avoid, minimize, or mitigate adverse effects to such properties.* Accordingly, the ACHP believes that FHWA will be responsible for addressing any unanticipated effects to the Meredith School, should they occur in the future.

In closing, the ACHP submits the following findings to FHWA to assist it in resolving this dispute about the proposed I-440 Improvement Project:

- Meredith College submitted its dispute regarding FHWA's No Adverse Effect finding to the ACHP and FHWA after the 30 day comment period ended in which objections can be made by consulting parties to the federal agency pursuant to 36 CFR Section 800.5(c)(2).
- The documentation provided to ACHP regarding this undertaking illustrates that FHWA made the reasonable and good faith effort to comply with the ACHP's four-step process. In accordance with 36 CFR Section 800.4(b)(1), FHWA and NCDOT worked closely with the SHPO to identify the appropriate NRHP eligible boundary for Meredith College. Upon receiving an addendum and appendices from Meredith College's consultants in January and June 2017, the SHPO agreed that a case had been made for a larger boundary based primarily on the designed landscape by Richard C. Bell that had recently turned 50 years old. The FHWA subsequently concurred with the revised determination of eligibility in March 2018.
- The ACHP is unclear why Meredith College did not address the issue about the NRHP eligible boundaries with FHWA and NCDOT at an earlier stage in project planning. Since the campus boundaries have been a concern to Meredith College's administration for several years, the

college could have pursued either an expanded boundary DOE or consulted with the SHPO to develop a National Register nomination form for the historic district, including the recognition of the additional areas associated with the Master Plan of the landscape architect Richard C. Bell.

- Once FHWA was made aware that Meredith College should be identified as a consulting party, it responded promptly and recognized the college in this role. This request was made late in this Section 106 consultation; however, the FHWA and NCDOT had afforded the college this status for several years.
- The ACHP recommends that FHWA and NCDOT identify and invite consulting parties to participate in the Section 106 consultation earlier in the process. Likewise, we recommend that you develop a flow chart that ensures that the identification of consulting parties under 36 CFR Section 800.2(c)(5) occurs in conjunction with the public outreach required under FHWA's National Environmental Policy Act (NEPA) guidelines.
- Since FHWA is still finalizing the design components and the preferred alternative for the I-440 Improvements Project, we encourage you to continue to work with consulting parties and to address any new concerns that are raised by them and the public in future meetings and related communications.
- FHWA, NCDOT and SHPO adhered to the procedures set forth in 36 CFR Section 800.5(2) (b) in concurring with the No Adverse Effect determination in September 2017. FHWA and NCDOT confirmed to the ACHP that the agency assessed indirect and cumulative effects in making this determination. If Meredith College requires verification that FHWA and NCDOT fulfilled this requirement, FHWA should consider providing the college with adequate documentation.

In accordance with 36 CFR 800.5(c)(3), FHWA should take into account this advisory opinion in reaching a final decision on its finding of effect, and provide to the ACHP, SHPO, Meredith College, and other consulting parties a summary of how these advisory comments were considered. Once the summary of the decision has been sent to the ACHP and other consulting parties, the FHWA's responsibilities are fulfilled for this step in the Section 106 process.

If you have any question, please contact Charlene Dwin Vaughn, AICP, at 202-517-0207 or via e-mail at [cvaughn@achp.gov](mailto:cvaughn@achp.gov).

Sincerely,



Reid J. Nelson  
Director  
Office of Federal Agency Programs



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(919) 747-7030  
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April 13, 2018

In Reply Refer To:  
HDA-NC

Ms. Liz Riley, Partner  
Womble Bond Dickinson (US) LLP  
555 Fayetteville Street  
Suite 1100  
Raleigh, North Carolina 27601

Dear Ms. Riley:

On March 5, 2018, I sent you notification of FHWA's receipt of your letter dated March 2, 2018, which included attachments and a series of emails, and that we would provide you an official response. As you know, FHWA forwarded the information provided by you to the Advisory Council on Historic Preservation (ACHP), and requested that the ACHP officially consult with FHWA on the effects findings for the Meredith College Campus historic site.

The ACHP formally responded to FHWA on April 2, 2018, along with the SHPO, NCDOT, and Meredith College representatives, including Womble, Bond, and Dickinson. Thus, we are now responding to you. Based on our review of the timeline listing coordination with Meredith College, the SHPO, NCDOT, and more recently the ACHP, FHWA has concluded that it has completed the requirements of Section 106 of the Historic Preservation Act of 1966, and has complied with the ACHP's regulations outlined in 36 CFR 800.

In your March 2, 2018, letter, you requested a response to four (4) primary questions. As a matter of due diligence, the questions are listed followed by an FHWA response below:

1. Have the Agency and/or NCHPO not seen visualizations similar to the enclosed as part of project, effects determination, and environmental documentation review? If FHWA or NCHPO have seen similar visualizations, then we question why they were not presented at the effects determination meeting that Mr. Barfield attended, or afterward, including when Meredith was finally officially designated a consulting party on December 21, 2017. If not, we question how the effects can be considered adequately assessed, and respectfully question the validity of the effects determination.

**FHWA Response:** Yes, FHWA and the SHPO have seen visualizations similar to the enclosed as part of project, effects determination, and environmental documentation review. Visualizations developed by NCDOT were reviewed and considered when determining effects.

2. Have the Agency and/or NCHPO not seen visualizations from the

perspective of being at the NW edge of the currently eligible district at the effects determination meeting—or afterward? If they have been viewed, then we respectfully question the validity of the effects determination.

**FHWA Response:** Visualizations developed by NCDOT, which provided views of the northwest edge of the Meredith College historic property, were reviewed and considered when determining effects. In their April 2, 2018 letter to FHWA, the ACHP determined FHWA properly applied the Criteria of Adverse Effect as outlined in 36 CFR Section 800.5(a).

3. Have neither FHWA and/or NCHPO seen on-site balloon tests regarding the visibility of the different levels of ramps, bridge, flyovers and other infrastructure, including assessing the impacts of the flyovers on the eligible district? If balloon tests have been conducted, Meredith has not been a party to such evaluations. If balloon tests have been conducted and viewed, then we respectfully question the validity of the effects determination.

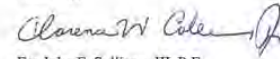
**FHWA Response:** No balloon tests were performed. However, the visualizations of the Meredith College historic property were reviewed for each alternative. In their April 2, 2018 letter to FHWA, the ACHP determined FHWA properly applied the Criteria of Adverse Effect as outlined in 36 CFR Section 800.5(a).

4. Can FHWA confirm that FHWA and NCHPO effects determination assessment did not include professionals with training and experience in delineating and assessing impacts to historic cultural landscapes, landscape architecture, horticulture, and landscape construction? The College respectfully reminds the Agency that the resource is a cultural landscape; the scope and relevancy of the Designed Historic Landscape district far exceed that of the building footprints and immediate surrounding setting. If multidisciplinary professionals were part of the effects determination team, such professionals were not documented. If multidisciplinary professionals were not part of the effects determination team, such failure would constitute additional grounds upon which we respectfully question the validity of the effects determination.

**FHWA Response:** Pursuant to 36 CFR 800.2(a)(1), FHWA, NCDOT and NCHPO ensured that all work was performed by employees and consultants with the professional qualifications defined in the *Secretary of the Interior's Professional Qualifications* at 36 CFR Part 61 and 48 FR 44716 in the fields of archaeology, architectural history, or historical architecture. In their April 2, 2018 letter to FHWA, the ACHP determined FHWA properly applied the Criteria of Adverse Effect as outlined in 36 CFR Section 800.5(a).

FHWA and NCDOT will continue to coordinate with Meredith College, as appropriate, during project development. If you have any questions, please contact Mr. Clarence Coleman, Director of Preconstruction and Environment, at 919-747-7014, or by email at [clarence.coleman@dot.gov](mailto:clarence.coleman@dot.gov)

Sincerely,



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

cc: Dr. Jo Allen, President, Meredith College  
Craig Barfield, Vice President, Business & Finance, Meredith College  
Ramona M. Bartos, Administrator, State Historic Preservation Office  
Felix Davila, Preconstruction and Environment Engineer, FHWA  
Renee Gledhill-Earley, Environmental Review Coordinator, State Historic Preservation Office  
Mary Pope Furr, Historic Architecture Team Lead, NCDOT  
Mary Ruffin Hanbury, Hanbury Preservation Consulting  
Jill Gurak, PE, Director, National Planning Practice, Atkins Global Steve Gurgamus, Land Planner, Womble Bond Dickinson (US) LLP  
Jamie Lancaster, PE, Priority Projects Unit, NC Department of Transportation  
Marjorie Spivak, Partner, Womble Bond Dickinson  
Sarah Stokely, Program Analyst, Advisory Council on Historic Preservation  
Rodney Swink, Landscape Architect and Professor of the Practice





April 25, 2018

**VIA EMAIL AND U.S. MAIL**

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

Mr. Clarence W. Coleman, P.E.  
Preconstruction & Environment Director  
Federal Highway Administration, North Carolina Division  
310 New Bern Avenue, Suite 410  
Raleigh, NC 27601

David S. Clarke  
Federal Preservation Officer  
Federal Highway Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Re: **Meredith College Section 106 Process and Effects Determination  
FA # IMSNHS-044(10); NCDOT TIP U-2719; Wake County  
Request for Documentation**

Dear Mr. Sullivan, Mr. Coleman, and Mr. Clarke:

As you know, this firm represents Meredith College ("Meredith College" or the "College") with respect to the above referenced Federal Highway Administration (FHWA) project. We write in follow-up to our March 2, 2018, letter on behalf of the College to Mr. Sullivan and Mr. Coleman regarding continuing concerns with the Section 106 process relating to the impact of the project on Meredith College. Since the March 2 letter, the Advisory Council on Historic Preservation (ACHP) wrote Mr. Coleman and Mr. Clarke a letter (the "ACHP Letter") regarding Meredith College's concerns. Additionally, Mr. Sullivan sent me a letter on April 13 addressing some of the concerns raised in our March 2 letter. The purpose of this letter is to provide Meredith College's position with respect to the adequacy and current status of the Section 106 process in light of this correspondence.

**CONCERNS WITH THE ACHP LETTER**

At the outset, we are compelled to point out that numerous statements in the ACHP Letter are either subject to potential confusion or contain outright mischaracterization of the relevant facts. For instance:

- The ACHP Letter states that "[d]ocumentation . . . evidences that Meredith College was involved in the Section 106 consultation process as a member of the Advisory Committee established in 2013." (ACHP Letter at 1-2.) While the ACHP is correct in noting that Meredith College was involved as a member of the Advisory Committee established in 2013, this inclusion in a committee does not evidence that Meredith College was allowed meaningful participation in the Section 106 process. Upon closer examination of the facts, the extent of any substantive involvement is revealed to be quite limited. The Advisory Committee focused on traffic, aesthetics, bike-ped mobility, and park impacts. We note that the (incomplete)

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Fearnbach historic survey of the Meredith Campus was not completed until April 2015. The College had to request a final copy of that report, which was delivered June 13, 2016. The College subsequently documented important missing data from that report which it submitted in June 2017. Furthermore, the Advisory Committee has not met since October 2014, long before the historic survey was completed.

- The ACHP Letter quotes a newspaper article as purported evidence indicating Meredith College's general contentment from the level of communication provided to it by NCDOT. (ACHP Letter at 2.) This expression of general "good will" in no way evidences that Meredith College has been afforded with the rights and privileges provided to it by law. Meredith College notes that general propositions regarding "keeping us in touch" and "listening to us" have no bearing on whether FHWA or NCDOT actually complied with the specific obligations set forth in Section 106's implementing regulations.
- The ACHP Letter states that "[o]n August 8, 2017, this No Adverse Effect finding with conditions was presented to representatives for NCDOT, FHWA, SHPO, and Mr. Barfield of Meredith College." (ACHP Letter at 3.) Mr. Barfield was neither informed of, nor invited to, an effects determination meeting or effects discussion prior to the August 22, 2017 effects determination meeting. The College's March 2, 2018, letter to FHWA described Mr. Barfield's participation at that meeting – as an uninvited observer – who sat on the periphery and was only asked about which alternative the College found to be lower impacting. The College attended the public hearing as a member of the general public on August 8, 2017, but effects on the eligible Meredith historic district were not discussed – only that the boundary had been expanded.
- The ACHP Letter indicates that "NCDOT, FHWA, and SHPO all concurred with the No Adverse Effect finding in September 2017." (ACHP Letter at 3.) However, the ACHP Letter is silent as to when, or if, this concurrence was communicated to Meredith College. In fact, FHWA did not provide documentation of the partially executed finding to Meredith College until the College made a request for documentation on December 15, 2017.

The above facts—as well as other comments in the ACHP Letter—result in a lack of certainty with respect to the status of the Section 106 process, as well as the position of either the ACHP or FHWA with respect to Meredith College's rights under Section 106.

As a threshold matter, the above lack of specificity as to the timeline of relevant regulatory proceedings has prejudiced the College's ability to exercise its rights under Section 106. At one point, the ACHP Letter asserts that Meredith College submitted its dispute after the 30-day comment period. (ACHP Letter at 3.) However, the ACHP Letter does not identify the date on which it contends that Meredith College received notice of the No Adverse Effect finding, or the date of the purported deadline for disputing that finding.

**DEFECTS WITHIN FHWA'S PROCESS TO DATE**

More important than these factual errors, Meredith College disputes ACHP's errant legal conclusion that "Meredith College was engaged as a consulting party and afforded the rights and privileges outlined in the 36 CFR Part 800." (ACHP Letter at 2.) Meredith College was not afforded the rights and privileges of consulting parties, as those rights are outlined in 36 CFR Part 800. Specifically, an agency "shall notify all consulting parties of the [No Adverse Effect] finding and provide them with the documentation specified in § 800.11(e)." 36 C.F.R. § 800.5(c). The documentation specified in § 800.11(e) includes the following:



- (1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary.
- (2) A description of the steps taken to identify historic properties;
- (3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register.
- (4) A description of the undertaking's effects on historic properties;
- (5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and.
- (6) Copies or summaries of any views provided by consulting parties and the public.

36 C.F.R. §800.11(e). Thus, the rights and privileges of a consulting party include notice of the finding and the provision of documentation supporting the finding. Meredith College was afforded neither effective notice nor sufficient documentation.

**Notice:** FHWA failed to provide Meredith College with notice of the No Adverse Effect finding, or the date of that finding. On September 5, 2017, Meredith College received, through the efforts of our law firm, an unexecuted copy of the Concurrence Form for Assessment of Effects. Meredith College did not receive a partially executed copy until December 15, 2017, after requesting it from NCDOT. Meredith College has not received any correspondence from FHWA regarding the finding.

**Documentation:** Even more concerning, the documentation provided to Meredith College to-date is woefully inadequate to satisfy FHWA's legal obligations. Meredith College has not received documentation directly from FHWA in satisfaction of any of the six categories listed in 36 C.F.R. 800.11(e). Instead, Meredith College came into possession of each of those documents through informal means such as accessing public websites, attending public meetings, and/or through informal correspondence with agency staff or consultants. The documentation was not provided within an ascertainable timeframe by which to calculate when the College's comments would need to be provided with respect to a 30-day deadline.

1. A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary. Meredith College obtained a copy of the June 2017 Environmental Assessment published by FHWA and NCDOT through a publicly available website. Neither FHWA nor NCDOT provided documentation satisfying this description directly to Meredith College.
2. A description of the steps taken to identify historic properties. The process used to identify historic properties is particularly important to Meredith College because there is still a dispute as to the eligibility of certain portions of the College campus. Meredith College has not received any correspondence or documentation from FHWA describing the steps taken to identify historic properties. The June 2017 Environmental Assessment

\* As Meredith College noted in the March 2 letter, the Concurrence Form for Assessment of Effects indicates that Craig Barfield, on behalf of Meredith College, agreed to the findings listed on the form. This is incorrect. Although Mr. Barfield was present at the August 22, 2017, meeting, he did not provide any agreement or concurrence. Similarly, he never signed any concurrence form.



only identifies one step taken to identify historic properties. (See EA at 3-14 ("Surveys by qualified historians were conducted in the project's Area of Potential Effect").) Although the Environmental Assessment notes that supporting documentation at the end of the relevant chapter of the Environmental Assessment contains further details, FHWA did not actually provide Meredith College with the supporting documentation listed. Rather than making these documents available to the public, the Environmental Assessment instructs that some documents are available only by request to NCDOT. At various points in the process, Meredith College collected some, but not all, of these documents from NCDOT or other sources. Meredith College still does not have a full description of the steps taken to identify historic properties to which it is entitled.

3. A description of the affected historic properties, including information on the characteristics that qualify them for the National Register. The only documentation that Meredith College has from FHWA reflecting a description of the affected historic properties is the Environmental Assessment, which contains a description of the site. However, Meredith does not have any updated description from FHWA describing the expanded historic area and the characteristics that qualify the expanded area for the National Register.
4. A description of the undertaking's effects on historic properties. The only documentation that Meredith College has from FHWA reflecting a description of the project's effects on Meredith College's historic area is the June 2017 Environmental Assessment. However, the Environmental Assessment does not contain any description of the project's effects on the newly-designated area determined to be part of the eligible historic property. It instead rests on the out-of-date and otherwise unsupported conclusion that the project will have "no effect" on Meredith College's historic area.
5. An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects. Meredith College has received no documentation containing any plausible explanation of why the criteria of adverse effect were not found applicable to the expanded historic area. Instead, Meredith College has only received documents with conclusory and unsubstantiated statements about how the project would "not alter the viewshed or setting."
6. Copies or summaries of any views provided by consulting parties and the public. Meredith College has received no copy or summary of any view provided by consulting parties or the public regarding the finding that the project will have no adverse effect on Meredith College's historic area. Where the Environmental Assessment does contain a brief summary of Meredith College's position, it mischaracterizes Meredith College's position. (See EA at 4-6.)

Notably, although the Environmental Assessment might otherwise satisfy some of the required documentation categories, it has not been updated since June 2017, while the No Adverse Effect finding did not occur until August or September of 2017. To the extent that additional documentation exists or should exist reflecting events that occurred between June 2017 and the No Adverse Effect finding, Meredith College has not received any such documentation.

Thus, contrary to the ACHP Letter, Meredith College has not been afforded the rights and privileges of a consulting party. Meredith College asks that these critical rights and privileges be afforded to it now.





#### **SUBSTANTIVE CONCERNS WITH UNADDRESSED EFFECTS**

Without the documentation to which it is entitled to under Section 106, Meredith College continues to be unable to provide detailed comments as to the No Adverse Effect determination. Meredith College suspects that, upon further review of the relevant documentation, it will have further comment regarding oversights and defects in FHWA's analysis of various issues, including but not limited to the following:

- Although the No Adverse Effect finding incorporates a requirement that NCDOT work with Meredith College to mitigate effects through landscaping, it does not contain any assessment of what that landscaping would involve. In particular, no documentation from FHWA, including the Environmental Assessment, demonstrates that FHWA assessed the amount of additional space which would be required for landscaping, how that space contributes to an indirect and cumulative effect of encroaching towards Meredith College's historic area, or whether it would require repurposing land included in the Richard C. Bell master plan.
- Meredith College is unaware of any effort made by FHWA to meaningfully assess, consider, and document how this project has indirect effects to Meredith College's eligible historic district. The views of the public are not addressed.
- Meredith College is unaware of any attempt made by FHWA to meaningfully consider and document how this project has a cumulative effect on Meredith College's historic area when considered in light of other previous projects impacting the eligible historic area. The views of the public are not addressed.
- The assessment of effects does not address or speak to the indirect and cumulative effects of project flyovers for the One Flyover alternative, or the Slight Detour alternative, to the eligible historic landscape. The views of the public are not addressed.
- Meredith College is unaware of whether FHWA considered and documented the direct, indirect, and cumulative effects of relocating the Reedy Creek Greenway to the North and East boundaries of campus, and how those effects will combine with the taking of property for additional right of way and increased light and noise to impact the historic area. The views of the public are not addressed.

The ACHP Letter indicates a further area of documentation that is necessary for Meredith College to substantively comment on the No Adverse Effect finding. The letter indicates that the FHWA and NCDOT provided ACHP with documentation showing the agency's analysis of indirect and cumulative effects and suggests that FHWA consider providing Meredith College with adequate documentation of this process. (ACHP Letter at 4.)

#### **PROPOSED RESOLUTION OF DEFECTS IN THE SECTION 106 PROCESS**

Meredith College proposes the following procedure to cure the deficient procedures and to afford Meredith College an appropriate opportunity to provide informed comments regarding the No Adverse Effect determination.

First, FHWA must provide Meredith College with the documentation specified in 36 CFR 800.11(e), and the documentation referenced in the ACHP Letter that relates to FHWA and NCDOT's analysis of indirect and cumulative effects on the historic area.

Second, once FHWA has provided Meredith College with the required documentation, it should clearly identify a deadline by which the College is to provide comments. Of course, this deadline should provide Meredith College with 30 days to compile its comments.



If necessary, Meredith College will then provide comments under 36 C.F.R. 800.5(c)(2), at which point the Section 106 process would resume.

Alternatively, if FHWA contends that Meredith College has been afforded all the rights and privileges of a consulting party and refuses to engage in further Section 106 consultation with the College, Meredith College requests that FHWA specifically identify:

- (1) when it provided notice to Meredith College of its No Adverse Effect finding;
- (2) how it provided notice to Meredith College of its No Adverse Effect finding; and,
- (3) each item of 36 C.F.R. 800.11(e) documentation that FHWA provided to Meredith College, including the date on which the each document was provided.

Finally, the ACHP Letter notes that "FHWA should take into account this advisory opinion in reaching a final decision on its finding of effect." Thus, it is Meredith College's position that no final decision on a finding of effect has been made. Please confirm whether or not FHWA believes it has made a final decision on a finding of effect.

#### **CONCLUSION**

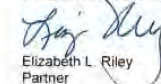
Meredith College remains committed to working with FHWA, NCDOT, and NCHPO to reach a consensus design for the project that best maintains the integrity of the historic area.

Meredith College stands prepared to enter into a Memorandum of Agreement process that would benefit all parties involved. The College would be satisfied with a Memorandum of Agreement that (1) preserves the advantages of the Slight Detour alternative but further minimizes the footprint of the Slight Detour alternative's flyover – which the College believes to be feasible; (2) eliminates the One Flyover alternative; (3) documents NCDOT's commitment to consult with Meredith College to develop a landscaping plan for the western edge of campus; and (4) agrees to the future location of the Reedy Creek Greenway in a manner that addresses the College's remaining concerns.

We appreciate the consideration of this letter and suggested framework for the parties to move forward with this project.

Best regards,

**Womble Bond Dickinson (US) LLP**

  
Elizabeth L. Riley  
Partner

ELR:sda

Enclosures





cc by email.

Dr. Jo Allen, President, Meredith College  
Craig Barfield, Vice President, Business & Finance, Meredith College  
Ramona M. Bartos, Administrator, State Historic Preservation Office  
Charles Birnbaum, the Cultural Landscape Foundation  
Felix Davila, Preconstruction & Environment Engineer, FHWA  
Renee Giedhill-Earley, Environmental Review Coordinator, State Historic Preservation Office  
Mary Pope Furr, Historic Architecture Team Lead, NCDOT  
Mary Ruffin Hanbury, Hanbury Preservation Consulting  
Jill Gurak, PE, director, National Planning Practice, Atkins Global  
Steve Gurganus, Land Planner, Womble Bond Dickinson (US) LLP  
Jamie Lancaster, PE, Priority Projects Unit, NC Department of Transportation  
Reid J. Nelson, Director, Office of Federal Agency Programs, ACHP  
Marjorie Spivak, Partner, Womble Bond Dickinson (US) LLP  
Sarah Stokely, Program Analyst, Advisory Council on Historic Preservation  
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May 23, 2018

In Reply Refer To:  
HDA-NC

Ms. Liz Riley, Partner  
Womble Bond Dickinson (US) LLP  
555 Fayetteville Street  
Suite 1100  
Raleigh, North Carolina 27601

Dear Ms. Riley:

This is in response to your April 25, 2018 letter regarding the Section 106 process for the proposed I-440 improvement project in Raleigh, Wake County, TIP No. U-2719. As you are aware, the Federal Highway Administration (FHWA) officially designated Meredith College as a consulting party on December 21, 2017, in response to a request from your firm, on Meredith's behalf, in a letter dated December 19, 2017.

Your April 25<sup>th</sup> letter alleges that FHWA failed to provide Meredith College with notice of the No Adverse Effect Finding for the project undertaking. For your information, FHWA, North Carolina Department of Transportation (NCDOT), Advisory Council on Historic Preservation (ACHP) and North Carolina State Historic Preservation Officer (NCSHPO) entered into a 2015 Amended Programmatic Agreement (PA) that outlines procedures for Section 106 compliance for minor transportation projects (those qualifying as a CE or EA) in North Carolina. The PA delegates many of FHWA's responsibilities under 36 CFR 800 to the NCDOT.

The record shows the NCDOT invited the Vice President of Business and Finance for Meredith College to attend the August 22, 2017 effects determination meeting for Meredith College. Your firm provided information to the NCSHPO on August 7, 2017 for consideration during the effects assessment meeting. The Vice President of Meredith College attended the August 22, 2017 meeting. Subsequently, Meredith College received an unexecuted copy of concurrence form for the Assessment of Effects. Your letter acknowledges that Meredith College received an executed copy on December 15, 2017. Thus, Meredith College was aware of the no adverse effect finding, prior to its request to become a consulting party.

Meredith College was also involved during the identification of historic properties phase of the project. Meredith College reviewed the 2015 historic architectural resource survey report for the Meredith College Campus prepared by Ms. Heather Fearnbach. This report provided basis for an extension of the 2004 historic boundary to the south and southeast to include the entrance driveway, amphitheater and lake as shown in a May 2015 map. An effects determination meeting was held in May 2017 based on this boundary.

Subsequently, Meredith College submitted additional information in January and June of 2017 to the NCSHPO to petition an extension of the historic boundary. This information led to a determination that more of the campus was eligible under Criterion C as a designed landscape by Richard C. Bell as outlined in the NCSHPO letter to Womble Bond Dickinson in August 2017. It is here that we note Mr. Bell's Meredith College Master Plan, adopted in 1968, considered and incorporated the expansion of what is now the I-440 and its interchanges with Hillsborough Street and Wade Avenue. The NCDOT conducted its August 2017 effects determination meeting based on the revised boundary.

Despite such involvement in the process, Meredith College did not provide a written request to participate as a consulting party until December 19, 2017. FHWA is required to consult with the SHPO and Indian Tribes. Local governments with jurisdiction are entitled to participate in the Section 106 process as a consulting party, along with applicants for federal assistance, permits, licenses, and other approvals. Certain individuals and organizations, such as Meredith College may participate as consulting parties. However, FHWA is not required to invite such parties to participate as consulting parties. In fact, the ACHP regulations state that FHWA shall consider written requests of individuals and organizations to participate as consulting parties; and, in consultation with the SHPO and any Indian tribe determine which should be consulting parties. Certain individuals and organizations, such as Meredith College are not "entitled" to participate as consulting parties.

FHWA granted Meredith College consulting party status on December 21, 2017 after consideration of Meredith College's written request. Then, Meredith College formally notified FHWA of their disagreement with, and objection to, FHWA's effects determination, and asserted that FHWA failed to comply with Section 106 in a March 2, 2018 letter. Subsequently, on March 5, 2018, FHWA requested the ACHP to review the finding pursuant to 36 CFR 800.5(c)(2)(i).

After reviewing relevant information from all parties, including documentation and correspondences related to the Meredith College historic site, the ACHP indicated in their April 2, 2018 opinion, that "FHWA properly applied the Criteria of Adverse Effect as outlined in 36 CFR Section 800.5(a) of our regulations. The agency concluded that the proposed undertaking, which is still being refined by FHWA and NCDOT, will not alter the character defining elements or the integrity of this historic property."

The ACHP April 2, 2018 letter states, pursuant to 36 CFR 800.5(c)(3), that FHWA should take into account ACHP's advisory opinion in reaching a final decision on its finding of effect, and provide to the ACHP, SHPO, Meredith College, and other consulting parties a summary of how these advisory comments were considered. FHWA has reviewed the findings and recommendations listed in the ACHP letter, and provides the following summary of proposed actions in response:

- **ACHP Finding:** Since FHWA is still finalizing the design components and the preferred alternative for the I-440 Improvements Project, we encourage you to continue to work with consulting parties and to address any new concerns that are raised by them and the public in future meetings and related communications.

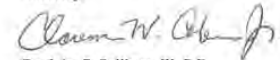
*FHWA Response:* FHWA and NCDOT commit to coordinate with each consulting party, including the SHPO and Meredith College during the design build phase for the proposed project.

**ACHP Finding:** FHWA, NCDOT and SHPO adhered to the procedures set forth in 36 CFR Section 800.5(2) (b) in concurring with the No Adverse Effect determination in September 2017. FHWA and NCDOT confirmed to the ACHP that the agency assessed indirect and cumulative effects in making this determination. If Meredith College requires verification that FHWA and NCDOT fulfilled this requirement, FHWA should consider providing the college with adequate documentation.

*FHWA Response:* Indirect and cumulative effects were considered. The roadway/interstate, and its interchanges were incorporated into Mr. Bell's 1966 Meredith College Master Plan. So, the existing roadway does not alter the character or the integrity of the Master Plan. Since the adoption of the Master Plan, Meredith College constructed apartment buildings, parking lots, and athletic fields that are not consistent with the Master Plan and limited the boundary of the property that is eligible for the National Register. Further, Meredith College erected a large sign adjacent to its gymnasium for those traveling on the interstate to view. NCDOT analyzed the visual, noise, and lighting effects and determined that the project would not alter the characteristics of the property that qualify it for inclusion on the National Register.

FHWA has determined that the project's direct and indirect impacts, when considered with past actions, will result in a No Adverse Effect on the Meredith College Campus historic site. Our responsibilities under Section 106 have been fulfilled. If you have any questions, please contact Mr. Clarence Coleman, Director of Preconstruction and Environment, at 919-747-7014, or by email at [clarence.coleman@dot.gov](mailto:clarence.coleman@dot.gov).

Sincerely,



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

cc: Dr. Jo Allen, President, Meredith College  
Craig Barfield, Vice President, Business & Finance, Meredith College  
Ramona M. Bartos, Administrator, State Historic Preservation Office  
Charlene Dwin Vaughn, Assistant Director, Advisory Council on Historic Preservation  
Sarah Stokely, Program Analyst, Advisory Council on Historic Preservation  
Renee Gledhill-Earley, Environmental Review Coordinator, State Historic Preservation Office  
Mary Pope Furr, Historic Architecture Team Lead, NCDOT  
Mary Ruffin Hanbury, Hanbury Preservation Consulting  
Steve Gurganus, Land Planner, Womble Bond Dickinson (US) LLP  
Jamie Lancaster, PE, Priority Projects Unit, NC Department of Transportation  
Marjorie Spivak, Partner, Womble Bond Dickinson  
Rodney Swink, Landscape Architect and Professor of the Practice  
Jill Gurak, PE, Director, National Planning Practice, Atkins Global  
Felix Davila, Preconstruction and Environment Engineer, FHWA

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# AGENCY CORRESPONDENCE

## B.3 Section 4(f) Correspondence



North Carolina Department of Natural and Cultural Resources  
Office of the Secretary

Governor Roy Cooper

April 18, 2018

Secretary Susi H. Hamilton

Mr. Jamie Lancaster  
1548 Mail Service Center  
Raleigh, NC 27699-1548

RE: U-2719 Project (I-440 Widening) and the NC Museum of Art's Museum Park

Dear Mr. Lancaster:

In three meetings held since May 2017, representatives from the North Carolina Department of Transportation (NCDOT) and the North Carolina Museum of Art (MOA), a division of the North Carolina Department of Natural and Cultural Resources (DNCR), discussed the probable impact on the Museum Park by the U-2719 project, the widening of I-440 from Walnut Street in Cary, N.C. to Wade Avenue in Raleigh, N.C. As the design for the project progressed, it became apparent that a small portion of the Museum Park, less than one acre, will be needed to complete the project.

Notification of the probable impact was communicated to DNCR and MOA due to their protected rights under 23 U.S.C 138 and 49 U.S.C 303 as amended by Section 6009 of SAFETEA-LU, commonly referred to as Section 4(f) from the Department of Transportation Act of 1966, requiring a finding of *de minimis* impact be determined by officials that own or administer the property in question.

During these meetings, public meetings, and subsequent correspondence, NCDOT agreed that the contribution of funds to on-site stream restoration was appropriate as mitigation, and that this mitigation project will not adversely affect the activities, features, and attributes that qualify the Museum Park for protection under the U.S. Department of Transportation's Section 4(f) law.

Based on the above assurances of DOT, specifically including the mitigation, DNCR and MOA concur that the U-2719 project will not adversely affect the activities, features, and attributes of the Museum Park that affords it protection under Section 4(f), resulting in a *de minimis* determination within the meaning of the law.

In addition to the contribution of mitigation funds for on-site stream restoration, DNCR requires that design approval be acquired in advance from DNCR and MOA for any retaining or noise wall necessary for the scope of the project that is planned on or adjacent to the property owned by the State of North Carolina.

DNCR and NCDOT have agreed upon terms for payment for the property, including mitigation, in a separate Interagency Agreement to be executed prior to the transfer of the property and initiation of the mitigation project.

Sincerely,

Susi H. Hamilton  
Secretary

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Raleigh, NC 27601



City of Raleigh  
North Carolina

April 24, 2018

Mr. Jamie Lancaster, PE  
Priority Projects Unit  
North Carolina Department of Transportation  
1595 Mail Service Center  
Raleigh, NC 27609-1595

Re: U-2719 I-440 Improvement Project

The City of Raleigh Parks, Recreation, and Cultural Resources Department have coordinated with the NC Department of Transportation (NCDOT) regarding the effects of Project U-2719 (I-440 Improvements) on public recreation facilities under the jurisdiction of the City.

For federally-funded projects such as Project U-2719, public parks and recreation facilities are afforded special protections under Section 4(f) of the USDOT Act (recodified in 49 U.S.C. § 303 and 23 U.S.C. § 138), and Section 6009(a) of SAFETEA-LU (23 CFR 774). Provisions in SAFETEA-LU allow that if a proposed transportation project is determined to not "adversely affect the activities, features, and attributes" of the resource protected under Section 4(f), then a *de minimis* finding can be made by FHWA to satisfy the requirements of Section 4(f).

There are four public parks and recreation facilities under the City of Raleigh's jurisdiction within the study area: Lake Johnson Park, Kaplan Park, Method Community Park, and Reedy Creek Greenway. The project's effects on these resources are summarized in the table below. These effects are based upon the preliminary engineering designs and other information regarding the project provided by NCDOT.

Resource	Project Area	Impact
Lake Johnson Park	Jones Franklin Road interchange – Upgrade Existing Partial Clover Alternative	The preliminary design would require a permanent drainage easement of approximately 0.25 acres within the park at the Walnut Creek culvert outfall. The Jones Franklin Road bridge over I-440 would be raised higher to meet current vertical clearance standards. A retaining wall will be provided along the park boundaries to avoid encroachment of the design onto park property.

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Kaplan Park	Symmetrical widening of I-440 between Athens Drive and Melbourne Road	An approximately 0.09-acre permanent drainage easement is needed from the park to extend the existing Simmons Branch culvert. The preliminary design in this area reflects a best-fit alignment that avoids permanent right of way encroachment on Kaplan Park and minimizes impacts to White Oak Lake and dam located on the west side of I-440.
Method Community Park	Ligon Street grade separation - Build Bridge to North Alternative	There will be no permanent impacts/encroachment on the park. However, a narrow strip of temporary construction easement may be necessary along the western edge of the park to install drainage features and/or construct the recommended noise wall. As a condition of a "No Adverse Effect" determination from the State Historic Preservation Office for impacts of the project on the Berry O'Kelly School Historic District (Method Community Park is within this historic boundary), NCDOT is working with the City of Raleigh and the Method community regarding aesthetic treatments and a potential public art project for the recommended noise wall. This will also mitigate any visual impacts from the project to the park.
Reedy Creek Greenway	Hillsborough Street and Wade Avenue interchange area - One Flyover Alternative-Revised and Slight Detour Alternative-Revised	Portions of the Reedy Creek Greenway on Meredith College property will need to be replaced from near the I-440 pedestrian bridge southward through the Meredith College main campus. As a condition of a "No Adverse Effect" determination from the State Historic Preservation Office for impacts of the project to the historic portion of Meredith College, a landscaping plan is required to be installed, in consultation with Meredith College, along the west side of the main campus where the proposed Reedy Creek Greenway also is located. This landscaping plan will help mitigate visual impacts of the project for greenway users.

After evaluation of the project's preliminary designs, the City of Raleigh Parks, Recreation, and Cultural Resources Department finds the impacts from the proposed project will not negatively affect the activities, features, or attributes of Lake Johnson Park, Kaplan Park, and Method Community Park. The City would concur with a FHWA finding of *de minimis* use relative to these properties.

Regarding the Reedy Creek Greenway, the Detailed Study Alternatives presented in the Environmental Assessment (EA) for the Hillsborough Street and Wade Avenue interchange area (One Flyover Alternative, Two Flyovers Alternative, and Slight Detour Alternative) showed most of the greenway on the main campus of Meredith College being impacted, with the greenway being relocated adjacent to the proposed new right of way.

NCDOT revised the designs of the One Flyover Alternative and the Slight Detour Alternative to reduce right of way needs. The Slight Detour Alternative-Revised and One Flyover Alternative-Revised greatly reduce the length of Reedy Creek Greenway impacted on the Meredith College main campus.

Based upon the revised preliminary engineering designs for the Slight Detour Alternative-Revised and One Flyover Alternative-Revised, the City of Raleigh Parks, Recreation, and Cultural Resources Department finds the new proposed alignment of the Reedy Creek Greenway placed adjacent to the proposed new right of way under either revised alternative would not adversely affect the activities, features, or attributes of the Reedy Creek Greenway. The City would concur with a FHWA finding of *de minimis* use relative to this greenway. The City of

Raleigh Parks, Recreation, and Cultural Resources Department prefers the Revised Slight Detour Alternative.

Furthermore, NCDOT, the City of Raleigh, and Meredith College also explored an alternative greenway alignment that would extend down Faircloth Street as one way of minimizing right of way needs along the west side of Meredith College's main campus. The greenway option explored along Faircloth Street, in comparison to the option that keeps the greenway along the west side of campus, would not provide the same user experience and would adversely affect the attributes of this segment of the Reedy Creek Greenway.

The City of Raleigh Parks, Recreation, and Cultural Resources Department requests NCDOT to minimize closures of the Reedy Creek Greenway during construction (to the extent practicable) and to inform the City in advance of any temporary closures.

If you have any questions or need further information, please contact Diane Sauer at (919) 996-4815 or by email at Diane.B.Sauer@raleighnc.gov.

Sincerely,

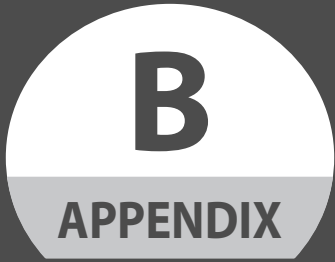


Diane B. Sauer  
City of Raleigh  
Parks, Recreation and Cultural Resources Department Director

Cc: Tansy Hayward, Assistant City Manager, City of Raleigh  
Scott Payne, PRCR Assistant Director, City of Raleigh  
Stephen Bentley, PRCR Assistant Director, City of Raleigh  
Lisa Schiffbauer, Sr. Engineering Supervisor, City of Raleigh  
Eric Lamb, Transportation Planning Manager, City of Raleigh  
Paul Kallam, Assistant Director of Infrastructure Services, City of Raleigh



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# AGENCY CORRESPONDENCE

## B.4 USACE Public Hearing Notice



US Army Corps  
Of Engineers  
Wilmington District

## PUBLIC NOTICE

Issue Date: July 13, 2017  
Comment Deadline: August 14, 2017  
Corps Action ID #: SAW-2012-01414  
STIP Project Number U-2719

The Wilmington District, Corps of Engineers (Corps) has received an application from the North Carolina Department of Transportation (NCDOT) regarding a potential future requirement for Department of the Army (DA) authorization to discharge dredged or fill material into waters of the United States associated with the proposed I-440 Improvements (STIP Project Number U-2719) in Wake County, North Carolina.

Specific design alternatives and location information are described below and shown on the attached maps. This Public Notice and attachments are also available on the Wilmington District Web Site at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

The Federal Highway Administration's (FHWA) Environmental Assessment (EA) and related maps for this project are available on the NCDOT website at <http://www.ncdot.gov/projects/I-440improvements/>.

**Applicant** North Carolina Department of Transportation (NCDOT)  
Project Development Group  
Attn: Beverly Robinson, CPM  
Project Development Group Supervisor  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

### Authority

The Corps will evaluate this application to compare alternatives that have been carried forward for detailed study pursuant to applicable procedures of Section 404 of the Clean Water Act (33 U.S.C. 1344).

In order to more fully integrate Section 404 permit requirements with the National Environmental Policy Act of 1969, and to give careful consideration to our required public interest review and 404(b)(1) compliance determination, the Corps is soliciting public comment on the merits of this proposal and on the alternatives evaluated in the I-440 Improvement Project FHWA EA (<http://www.ncdot.gov/projects/I-440improvements/>). At the close of this comment period, the District Commander will evaluate and consider the comments received, as well as the expected adverse and beneficial effects of the proposed road construction, to select the least environmentally damaging practicable alternative (LEDPA). The District Commander is not authorizing construction of the proposed project at this time. A final DA permit may be issued only after our review process is complete, impacts to the aquatic environment have been minimized to the maximum extent practicable, and a compensatory mitigation plan for unavoidable impacts has been approved.

### Location

The proposed project corridor includes approximately 6 miles of the I-440/US 1-64 freeway from south of Walnut Street (SR 1313) in the Town of Cary to east of Wade Avenue (SR 1728) in the City of Raleigh, all in Wake County, North Carolina, and is referred to as the I-440 Improvement Project (see attached drawings). I-440 (known as the Raleigh Beltline) travels around the west, north, and east sides of downtown Raleigh, and this project segment of I-440 is west of downtown Raleigh. Note that I-440 is signed eastbound and westbound, even though in the project area I-440 runs more north/south. US 1-64 is signed northbound and southbound, and this is how it is oriented in the project area. The project is included as Project U-2719 in NCDOT's adopted 2016-2025 State Transportation Improvement Program (STIP) and draft 2017-2027 STIP, and is planned to be constructed as a design-build project. Being a design-build project means the construction contractor will be responsible for the final design plans, right of way acquisition, and construction.

### Existing Site Conditions

Wake County is located within the piedmont region of central North Carolina. The Raleigh-Durham-Chapel Hill metropolitan area is one of the fastest growing regions in the country. The project is located in an established mixed-use urban area approximately 3 miles west of downtown Raleigh. There are several residential neighborhoods, parks, and commercial areas along the corridor. I-440 provides a route to several major destinations located in and around the project study area, including the North Carolina State Fairgrounds, Carter-Finley Stadium, PNC Arena, the North Carolina Museum of Art, Rex Hospital, North Carolina State University (NCSU), Meredith College, and Crossroads Mall. I-440/US 1-64 has the following interchanges in the project study area, listed from west to east:

- Walnut Street
- Crossroads Boulevard (partial interchange)
- Hillsborough Street (NC 54)
- Western Boulevard
- Melbourne Road (partial interchange)
- Jones Franklin Road
- I-40
- Wade Avenue
- Lake Boone Trail

There are three additional roadway crossings of I-440 that do not have interchanges:

- Beryl Road crosses under the I-440 bridge that also spans the railroad tracks and Hillsborough Street
- Ligon Street crosses through a one-lane tunnel under I-440
- Athens Drive is on a bridge over I-440

Although some of the interchanges are proposed to be re-designed, none of the interchanges are proposed to be removed, and no new interchanges will be added.



The project study area is contained within the Neuse River Basin. Water resources in the study area are part of the U.S. Geological Survey (USGS) Hydrologic Unit 03020201). Named streams in the corridor include Walnut Creek, Simmons Branch, Bushy Creek, and House Creek. There are also numerous unnamed tributaries to these streams in the project corridor. Permanent impacts to streams for any combination of Detailed Study Alternatives end-to-end range from 1,826 to 2,145 linear feet. Temporary impacts to streams range from 821 to 973 linear feet. Wetland impact areas occur only in two general locations, near Lake Johnson at the Jones Franklin Road interchange and near White Oak Lake between Athens Drive and Melbourne Road. Total wetland impacts for any combination of Detailed Study Alternatives end-to-end would be approximately 0.09 acre of permanent impact and 0.01 acre of temporary impact.

Streams west of the I-440/Walnut Street interchange in the project study area are in the Swift Creek watershed and are classified as Water Supply WS-III, which is defined as waters (or tributaries of waters) used as sources of water supply for drinking or food processing. The project corridor is approximately 2 miles from Swift Creek and outside the critical area for the Swift Creek water supply watershed. All streams east of the I-440/Walnut Street interchange in the project study area are classified by the NC DEQ Division of Water Resources as Class C and Nutrient Sensitive Waters. Class C Waters are protected for uses such as secondary recreation (boating and other activities with incidental water contact), fishing, wildlife, fish consumption, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. The Nutrient Sensitive Waters classification indicates the stream needs additional nutrient management (e.g., fertilizers) because there is excessive vegetative growth downstream in the Neuse River estuary.

#### **Applicant's Stated Purpose**

The primary purposes of the proposed project are to: improve traffic flow, make the roadway operate more efficiently, and enhance mobility on this segment of I-440.

The project will address the need to increase capacity, improve the layout of the roadway and interchanges, and fix poor conditions along this segment of I-440.

#### **Project Description**

NCDOT proposes to proposes to widen approximately 6 miles of I-440/US 1-64 from south of Walnut Street in Cary to east of Wade Avenue in Raleigh from four lanes to six lanes and to eliminate bottlenecks at both ends of the project, a distance of approximately 6 miles. An additional through lane in each direction of I-440 is proposed. There would be a total of three through lanes in each direction with a grass or hard median in the center, depending on available space. This would match the three lanes in each direction that exist along the remainder of I-440 and would eliminate the bottlenecks located at either end of the project area. The project would also reconstruct interchanges, replace structures, and repair pavement conditions. The project study area is entirely within Wake County.

#### **Detailed Study Alternatives**

Alternatives were developed for the mainline widening and for each interchange and grade separation and narrowed down to those studied in detail. Each of the Detailed Study Alternatives (DSAs) for a project element (interchange or grade separation) can be combined with any of the others, along with the mainline widening, to create the improvements for the entire corridor. There are 36 different possible combinations of the Detailed Study Alternatives to get from the beginning of the project south of Walnut Street to the end of the project near Lake Boone Trail.

The Detailed Study Alternatives are listed below from west to east. In all instances, the mainline is widened to three through-lanes in each direction.

- South of Walnut St interchange through the I-40 interchange
  - Widen I-440 only (no interchange improvements)
- Jones Franklin Road interchange
  - Upgrade Existing Partial Clover
- Athens Drive grade separation
  - Replace Bridge in Place
  - Replace Bridge to North
- Melbourne Road interchange
  - Replace Bridge in Place
  - Replace Bridge to North
- Western Boulevard interchange
  - Double Crossover Diamond (also called a Diverging Diamond)
- Ligon Street grade separation
  - Replace Bridge to North
  - Replace Bridge to South
  - Extend Existing Traffic Culvert
- Hillsborough Street/Wade Avenue interchanges
  - One Flyover
  - Two Flyovers
  - Slight Detour

A No-Build Alternative was also retained as a baseline against which the benefits, costs and impacts of the build DSAs could be compared, in accordance with NEPA regulations and FHWA guidelines. The No-Build Alternative assumed that the transportation network in the study area will continue to develop as called for in the current Long Range Transportation Plans, but without the road improvements in the U-2719 project.

For construction, right of way, and utilities, the project is estimated to cost a total of \$450.4 million to \$475.3 million (2017 dollars). Depending on the DSA, construction costs range from \$228.9 million to \$239.2 million, right-of-way costs range from \$213.3 million to \$234.2 million, and utility relocation costs range from \$6.0 million to \$6.4 million.

Mapped impacts to Section 404 jurisdictional features are shown on Figure 1, attached.

Impacts to streams are shown in Table 1, below.

**Table 1. Summary of Permanent and Temporary Stream Impacts**

Interchange or Grade Separation Location Area (east to west)	Detailed Study Alternative XX / XX = Permanent Impacts / Temporary Impacts (linear feet)		
	One Flyover	Two Flyovers	Slight Detour
Hillsborough St / Wade Ave interchanges <sup>1</sup>	540 / 328	625 / 416	541 / 329
Ligon St grade separation	Bridge North 174 / 0	Bridge South 310 / 64	Extend Culvert 125 / 0
Western Blvd interchange	Double Crossover Diamond 376 / 125		
Melbourne Rd interchange	Bridge In Place 418 / 137	Bridge North 418 / 137	
Athens Dr grade separation	Bridge In Place 0 / 0	Bridge North 0 / 0	
Jones Franklin Rd interchange	Upgrade Existing Partial Clover 367 / 231		
I-40 interchange and west	Widen I-440 Only 0 / 0		
<b>RANGE OF PERMANENT IMPACTS</b>	<b>1,826 – 2,145</b>		
<b>RANGE OF TEMPORARY IMPACTS</b>	<b>821-973</b>		

1. Impacts based on construction limits plus a 25-foot buffer

**Wetland Impacts:** Total wetland impacts would be the same for any end-to-end alternative. Total wetland impacts would be approximately 3,877 square feet (0.09 acre) of permanent impact and 261 square feet (0.01 acre) of temporary impact.

**Pond Impacts:** Impacts to ponds would be the same for any end-to-end alternatives, since these impacts occur where there is only one option currently under consideration. Total pond impacts would be approximately 31,842 square feet (0.73 acre) of permanent impact and 9,801 square feet (0.23 acre) of temporary impact. It should be noted that the City of Raleigh has a project to relocate the White Oak Lake dam outside the U-2719 proposed right of way, which is a separate project and will be permitted separately.

### Cultural Resources

The FHWA is the lead federal agency for this project and, in accordance with Section 106 of the National Historic Preservation Act (NHPA), has made determinations and requested concurrence with these determinations from the North Carolina State Historic Preservation Office (NCSHPO). Five resources within the project study area were found to be either listed on the National Register of Historic Places (NRHP) or were considered eligible for listing. NCSHPO has concurred with the FHWA effect determination as follows:

- Oak Grove Cemetery - No Adverse Effect or Adverse Effect - Depending on Alternative. The Build Bridge to South Alternative would adversely affect the cemetery due to proximity of proposed earthwork needed for the roadway approach to the Ligon Street Bridge. If this alternative is selected, additional coordination and consultation between NCDOT, FHWA, NCHPO, and property owners must occur to explore ways to avoid and minimize impacts and include measures to mitigate adverse effects. Measures needed to resolve adverse effects would be documented in a Memorandum of Agreement.
- Berry O’Kelly School Historic District - No Adverse Effect.
- Capitol City Lumber Company (portion) - No Effect.
- Royal Baking Company - No Effect.
- Meredith College (portion) - No Effect.

### Archaeological Resources

There are no archaeological resources in the project area that are on or eligible for listing on the National Register of Historic Places. The NC Historic Preservation Office (NCHPO) stated that based on their knowledge of the area, “We, therefore, recommend that no archaeological investigation be conducted in connection with this project.” (letter to NCDOT dated August 13, 2012, included in EA Appendix D2).

### Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) provides protection to historic properties, public parks, and recreation areas. The proposed project would result in a “use” of historic properties and park/recreation areas, depending on the selected alternative. Use of a Section 4(f) property occurs when land is permanently incorporated into a transportation facility; or when there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose; or when there is a constructive use (a project’s proximity impacts are so severe that the protected activities, features, or attributes of a property are substantially impaired). None of the Detailed Study Alternatives would use lands within Method Community Park or House Creek Greenway. Some of the Detailed Study Alternatives for the proposed project would require use of Section 4(f)-protected property from Lake Johnson Park, Kaplan Park, Museum Park, and Reedy Creek Greenway. With publication of the EA, FHWA requested comments on the proposed findings of de minimis impact for those properties. FHWA’s final determinations on findings regarding these properties will consider this public input.

### Endangered Species

The following table contains the federally listed threatened and endangered species for Wake County and determinations made by the FHWA, the lead federal agency for this project.

Table 3. Protected Species in Wake County

Common Name	Scientific Name	Status	Biological Conclusion
Michaux's sumac	<i>Rhus michauxii</i>	Endangered	No Effect
Dwarf wedgemussel	<i>Alasmidonta heterodon</i>	Endangered	No Effect
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	No Effect
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	May Affect, Likely to Adversely Affect

Northern Long-Eared Bat. The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with FHWA, USACE, and NCDOT for the northern long-eared bat in eastern North Carolina (which includes Wake County). The PBO went into effect in 2016 and covers all NCDOT projects and activities in NCDOT Divisions 1 to 8. The programmatic determination for the bat is "May Affect, Likely to Adversely Affect". The PBO involves a research and tracking program to establish conclusive information concerning the existence of the northern long-eared bat in the eastern part of North Carolina. The PBO also requires that upon completion of clearing activities for each project with federal funds, NCDOT will report on the estimated acres of clearing to the US Fish and Wildlife Service.

### Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

### Avoidance, Minimization and Compensatory Mitigation

Through development of the preliminary functional designs within the DSAs, NCDOT has attempted to avoid impacts to streams and wetlands to the greatest practicable extent. This included developing alignments and interchange configurations for the DSAs that avoided these resources as much as possible, while also minimizing impacts to other resources. For example, retaining walls are proposed where Walnut Creek crosses under I-440 to avoid impacting this creek. A retaining wall also is proposed to avoid a pond on the Meredith College campus. NCDOT will continue to seek ways to avoid and minimize impacts in further design efforts for the Preferred Alternatives.

The purpose of compensatory mitigation is to offset unavoidable functional losses to the aquatic environment resulting from project impacts to waters of the United States. NCDOT intends to coordinate with the NCDEQ Division of Mitigation Services to provide the required compensatory mitigation.

### Commenting Information

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to select the least environmentally damaging practicable alternative (LEDPA) for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above.

Comments are used in the preparation of a Corps of Engineers Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

NCDOT is holding a combined public meeting/public hearing for this project, as follows:

Tuesday, August 8, 2017  
NC State University – McKimmon Center  
1101 Gorman Street  
Raleigh, NC 27606  
Public Meeting: 4:00 to 6:30 pm, Formal Hearing: 7:00 pm

NCDOT representatives will be available between 4:00 p.m. and 6:30 p.m. to answer questions and receive comments concerning the proposed project. The opportunity to submit written comments or questions will also be provided. The public may attend at any time during the above mentioned hours.

A formal presentation and hearing will begin at 7:00 p.m. on Tuesday, August 8, 2017 NC State University – McKimmon Center. The presentation will consist of an explanation of the proposed project location, design, right-of-way, relocation requirements/procedures, and the state-federal relationship. The hearing will be open to those present for statements, questions, and comments. The presentation and comments will be recorded and a transcript will be prepared. A Corps representative will attend the formal hearing, and the Corps will receive a copy of the public comments.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, August 14, 2017. Written comments should be submitted to Mr. Eric Alsmeyer, US Army Corps of Engineers, Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587, telephone (919) 554-4884, extension 23. Written comments can also be submitted by email to [eric.c.alsmeyer@usace.army.mil](mailto:eric.c.alsmeyer@usace.army.mil).



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# COMMENTS AND RESPONSES TO COMMENTS

## Introduction to Appendix C

### Sources of Comments

The comment period for the project closed on September 8, 2017. Comments came in the form of a transcript from the Public Hearing, comment forms, emails, letters, and as comments from a project-specific on-line comment forum.

### Numbering of Comments

Each comment form, email, and letter was assigned a document number, and each speaker at the Public Hearing was assigned a speaker number, as listed below:

- A-### - emails and letters from agencies and organizations
- T-### - speaker on Public Hearing transcript
- C-### - comment forms
- EL-### - emails and letters from the public

Each document and the transcript was reviewed, and comments that required a response were bracketed and numbered. For example, agency letter A-001 has one comment, bracketed like this:

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

Comments received via the online public forum were each assigned a unique comment number. Most people chose to comment anonymously on the on-line comment forum, so these comments were not organized by commenter, they were just numbered as they were provided from the on-line forum.

## **Topic Categories Assigned to Comments**

In order to better sort and organize the comments, each comment was categorized as dealing with one or more of the following categories:

- Agency Coordination
- Air Quality
- Alternatives
- Arboretum
- Bicycles/pedestrians
- Community resources
- Construction
- Cost/funding
- Design
- Design-build process
- Geotechnical
- Hazardous materials
- Historic resources
- Lighting
- Meredith College
- Natural Resources
- Noise
- Other
- Parks and greenways
- Planning
- Public art
- Public involvement
- Public transit
- Right of way
- Safety
- Schedule
- Secondary and cumulative impacts
- Solid waste
- Traffic
- University Club
- Visual resources
- Water resources

## **Common Comments**

While going through the organization process, it was seen that many comments were the same or similar, which resulted in similar responses. Therefore, Common Comments were created, with responses that could be referred to throughout **Appendix C**.

## **Organization of Appendix C**

The comments received on the project are grouped in sub-appendices in **Appendix C** as listed below. Each sub-appendix includes tables listing each comment addressed, the topics related to each comment, and the response to the comment. Appendices that include comment forms, emails, letters, and the transcript also include these documents (with brackets) following the comment/response table.

- C1 – Tallies of Commenter Preferences
- C2 – Common Comments
- C3 – Agencies and Organizations
- C4 - Public Hearing Transcript
- C5 – Comment Forms
- C6 – Emails and Letters
- C7 – On-Line Comment Forum





# COMMENTS AND RESPONSES

## C.1 Tallies of Commenter Preferences

### **Note Regarding the Tallies**

For each location, tallies were gathered of the preferences expressed in the public comments to help indicate general trends or sentiments regarding the proposed project. They were also used to help in the decision-making process for determining the selection of alternatives. Tallies from the on-line comment forum should be considered with caution as commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices.

**Location: Jones Franklin Rd Interchange**  
**Alternatives: Upgrade Existing Partial Clover**

**Tallies:**

**Table C1.1: Documents Including Jones Franklin Road Comments**

# of Documents*	# Stating Support Upgrade Existing Partial Clover	# Stating Oppose Upgrade Existing Partial Clover
15	6	1

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

*NOTE: There is a difference between the number of documents versus the number stating support/oppose, which is due to some participants commenting on the interchange design but not stating explicit support or opposition to the proposed alternative.*

**Table C1.2: On-Line Comment Forum - Jones Franklin Road Comments**

# of On-line comments	# of "Like" Upgrade Existing Partial Clover	# of "Don't Like" Upgrade Existing Partial Clover
76	23	47

Note: The number "Like" and "Don't Like" were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

*NOTE: Many survey participants confused the Jones Franklin interchange question with the Hillsborough-Wade interchange (many commenting about Meredith College and University Club); therefore, the tally data for the Jones Franklin interchange within the on-line poll is not a true representation of Likes/Don't Likes for Jones Franklin Rd. Therefore, the counts in the table above only include entries that had a written comment specifically referencing Jones Franklin Road. "Like" and "Don't Like" and "I Don't Understand" entries that were accompanied by a comment specifically about another location or had no written comment were not included in the table above.*

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*

**Location: Athens Drive Grade Separation**  
**Alternatives: Replace Bridge in Place, Replace Bridge to North**

**Tallies:**

**Table C1.3: Documents Including Athens Drive Comments**

# of Documents*	# Stating Support Replace Bridge in Place	# Stating Oppose Replace Bridge in Place	# Stating Support Replace Bridge to North	# Stating Oppose Replace Bridge to North
14	6	2	6	1

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

**Table C1.4: On-Line Comment Forum - Athens Drive Comments**

# of On-line comments	# of "Like" Replace Bridge in Place	# of "Don't Like" Replace Bridge in Place	# of "Like" Replace Bridge to North	# of "Don't Like" Replace Bridge to North
85	280	138	121	262

Note: The number "Like" and "Don't Like" were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*



**Location: Melbourne Road Interchange**  
**Alternatives: Replace Bridge in Place; Replace Bridge to North**

**Tallies:**

**Table C1.5: Documents Including Melbourne Road Comments**

# of Documents*	# Stating Support Replace Bridge in Place	# Stating Oppose Replace Bridge in Place	# Stating Support Replace Bridge to North	# Stating Oppose Replace Bridge to North
32	18	2	5	2

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

**Table C1.6: On-Line Comment Forum - Melbourne Road Comments**

# of On-line comments	# of "Like" Replace Bridge in Place	# of "Don't Like" Replace Bridge in Place	# of "Like" Replace Bridge to North	# of "Don't Like" Replace Bridge to North
195	219	135	79	245

Note: The number "Like" and "Don't Like" were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

**Table C1.7: Tallies of Frequently Cited Issues Raised in Comments**

Issue	# of Documents	# On-Line Comments	# Upvotes of On-Line Comments	# Unique IP Addresses for On-Line Comments
Eliminate Melbourne Road interchange ramps	8	55	130	31
Keep Melbourne Road interchange ramps	1	42	50	13
Keep Deboy St connection to off-ramp	5	25	50	21

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers. Note that there is no way of knowing who made the upvotes, so the upvote count may include multiple upvotes by a single commenter.

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*

**Location: Western Boulevard Interchange  
Alternatives: Double Crossover Diamond**

**Tallies:**

**Table C1.8: Documents Including Western Boulevard Comments**

# of Documents*	# Stating Support Double Crossover Diamond	# Stating Oppose Double Crossover Diamond
14	7	0

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

**Table C1.9: On-Line Comment Forum - Western Boulevard Comments**

# of On-line comments	# of "Like" Double Crossover Diamond	# of "Don't Like" Double Crossover Diamond
59	277	179

Note: The number "Like" and "Don't Like" were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*

**Location: Ligon Street Grade Separation**  
**Alternatives: Extend Culvert, Build Bridge to South, Build Bridge to North**

**Tallies:**

**Table C1.10: Documents Including Ligon Street Comments**

# of Documents*	# Stating Support Extend Culvert	# Stating Oppose Extend Culvert	# Stating Support Build Bridge to South	# Stating Oppose Build Bridge to South	# Stating Support Build Bridge to North	# Stating Oppose Build Bridge to North
10	2	2	3	2	1	1

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

**Table C1.11: On-Line Comment Forum - Ligon Street Comments**

# of On-line comments	# Stating Support Extend Culvert	# Stating Oppose Extend Culvert	# Stating Support Build Bridge to South	# Stating Oppose Build Bridge to South	# Stating Support Build Bridge to North	# Stating Oppose Build Bridge to North
60	124	139	70	170	55	177

Note: The number "Like" and "Don't Like" were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*



**Location: Hillsborough Street and Wade Avenue Interchange Area**  
**Alternatives: One Flyover, Two Flyovers, Slight Detour**

**Tallies:**

**Table C1.12: Documents Including Hillsborough-Wade Comments**

# of Documents*	# Stating Support One Flyover	# Stating Oppose One Flyover	# Stating Support Two Flyovers	# Stating Oppose Two Flyovers	# Stating Support Slight Detour	# Stating Oppose Slight Detour
44	7	2	8	3	10	3

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers.

*Note: The tallies above only include commenters that stated or marked a preference or opposition to specific alternatives.*

**Table C1.13: On-Line Comment Forum - Hillsborough-Wade Comments**

# of On-line comments	# Stating Support One Flyover	# Stating Oppose One Flyover	# Stating Support Two Flyovers	# Stating Oppose Two Flyovers	# Stating Support Slight Detour	# Stating Oppose Slight Detour
1,637	74	1,082	106	1,030	122	1,009

Note: The number “Like” and “Don’t Like” were taken from the pie chart data obtained from the on-line comment forum. The number of on-line comments was counted from the comment database created from the on-line comment forum comments.

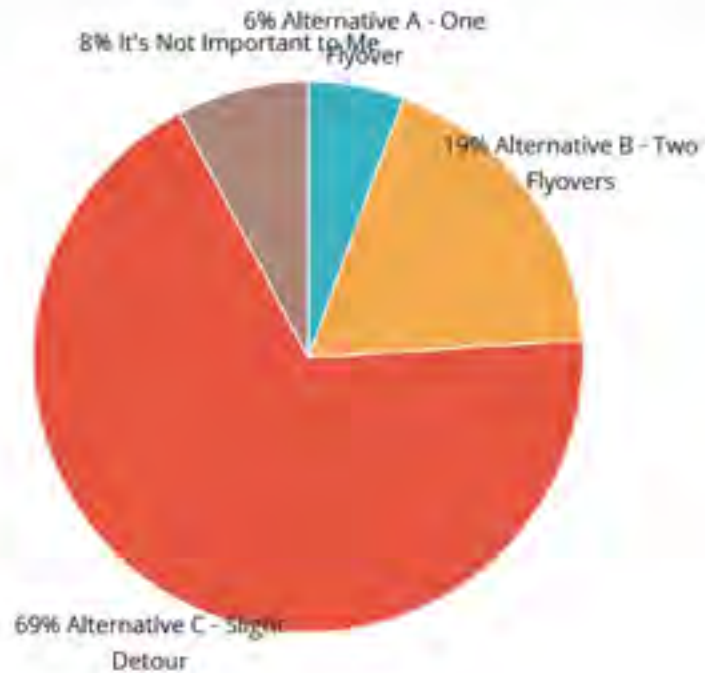
*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*

**Table C1.14: On-Line Comment Forum Topic Breakdown**

Hillsborough-Wade Design	Meredith College	University Club	Meredith & University Club	Arboretum
126	1,159	112	240	145

The following question was included in the on-line survey:

If you had to choose one of the three options for the Hillsborough-Wade Interchange, which would it be?



6%	Alternative A - One Flyover	32 ✓
18%	Alternative B - Two Flyovers	104 ✓
68%	Alternative C - Slight Detour	387 ✓
8%	It's Not Important to Me	44 ✓

**Table C1.15: Tallies of Frequently Cited Issues Raised in Comments**

Issue	# of Documents	# On-Line Comments	# Upvotes of On-Line Comments	# Unique IP Addresses for On-Line Comments
Eliminate Hillsborough Street interchange	19	104	632	95
Do not close access to the JC Raulston Arboretum on Beryl Road during construction	0	145	71	87

\* Types of documents include: comment forms, emails, letters, agencies, organizations, and transcript speakers. Note that there is no way of knowing who made the upvotes, so the upvote count may include multiple upvotes by a single commenter.

*Tallies from the on-line comment forum should be considered with caution. Commenters were free to comment or select a preference more than one time. Also, from a review of IP addresses, IP addresses were sometimes the same for multiple comments about one interchange/grade separation area, and most people chose not to provide their name, making it more difficult to track the comments. The same IP address appearing numerous times could mean the same person or it could mean different people using the same computer (public or private computer). Also, the same person could provide comments via multiple devices. Therefore, the tallies and numbers of people making a particular comment are not reliable; except to possibly indicate general trends or sentiments.*



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# COMMENTS AND RESPONSES

## C.2 Common Comments

## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Arboretum	Construction	Arboretum Common #1	Maintain access to Beryl Road during the construction process.	<p>NCDOT expects Beryl Rd would be closed for a short period of time for bridge demolition and to set bridge beams for the new I-440 bridge over Hillsborough St/Beryl Rd/railroad tracks. NCDOT would restrict those activities to weekends or nights to ensure Beryl Rd is open to traffic during business operations. Overall, there may be a few weekends or nights where Beryl Rd would be closed. The JC Raulston Arboretum and other property owners along Beryl Road will be notified in advance when closures are expected and NCDOT will work with the Arboretum regarding accommodating important arboretum events.</p> <p>In addition, NCDOT will coordinate the construction of the Ligon St crossing with construction activities along Beryl Rd and plans to let both the I-440 project and the Blue Ridge Road grade separation project (U-4437) to the same design-build team so that these two projects and their plans to maintain traffic during construction can be coordinated.</p>
Athens	Right of way	Athens Dr Common #1	Will impacted property owners be fairly compensated?	NCDOT tries to minimize right of way impacts as much as possible. Measures to reduce the right of way needs and relocations caused by the project will continue to be investigated through final design. NCDOT will follow their established processes for acquiring property and assisting residents and businesses in relocation, as described on page 3-4 of the EA. NCDOT pays fair market value for all property purchased. In addition, for renters and homeowners who are relocated by the project, NCDOT offers several programs to minimize the inconvenience of relocation.
Athens	Construction	Athens Dr Common #2	Travelers use the Athens Drive bridge to access Athens Drive High School, Thomas Crowder Wetland Center, Lake Johnson Park and other facilities. How will access be maintained, especially if the Melbourne Road bridge is also closed.	<p>Under the Replace Bridge to North Alternative, access for motorists, bicyclists, and pedestrians would be maintained on the existing bridge during construction, with brief closures.</p> <p>Under the Replace Bridge in Place Alternative, motorists would need to use an offsite detour, which will be identified during the construction phase. For bicyclists and pedestrians, access across I-440 at Athens Drive during construction will be addressed during final design and finalized during the construction phase by the design-build team. A temporary bus service across I-440 during bridge closure could be one potential solution. The costs of a temporary bus service would be less than the cost difference between the Replace Bridge in Place and Replace Bridge to North Alternatives (approximately \$1.3 million).</p>
Hillsborough-Wade	Right of way	Hillsborough-Wade Common #1	The proposed alternatives take too much land from the University Club and will destroy the club's facilities, which may force it to close. Please consider alternatives that take less land.	Typically, detailed measures to minimize right of way are investigated during the final design process. NCDOT has heard the concerns from the public and area stakeholders regarding the preliminary designs at the Wade Ave and Hillsborough St interchanges and explored ways to minimize estimated right of way needs prior to final design, as presented in the FONSI. Efforts will continue through final design to minimize impacts.



## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Hillsborough-Wade	Noise, Air quality, Water resources	Hillsborough-Wade Common #2	The proposed project would bring traffic, traffic noise, and air pollution close to University Club facilities. Also concern about water runoff and control.	<p>The I-440 mainlines will be closer to University Club facilities, and noise levels would be louder in year 2035 peak hours compared to the no-build alternative. However, a noise wall was evaluated and determined to not be reasonable based on established FHWA and NCDOT criteria.</p> <p>Regarding air quality (see EA Section 3.6), Wake County is currently meeting the established standards for the six pollutants for which National Ambient Air Quality Standards have been established (for example, carbon monoxide, particulate matter, and ozone) and a project-level analysis of these pollutants is not required. Mobile source air toxics also were addressed. Overall, due to required controls on fuel and engines, air toxic emissions are projected to decrease approximately 88 percent between 2012 and 2035 under both the build and no-build scenarios.</p> <p>The widening will require the clearing of vegetation along the corridor, but disturbed areas will be revegetated. Runoff is discussed in Section 3.10.4 of the EA. For runoff during construction, the project will follow Design Standards in Sensitive Watersheds and Neuse River Riparian Buffer Rules to prevent water pollution, soil erosion, and stream siltation. A Stormwater Management Plan will be prepared during final design of the project to direct the drainage design and manage long-term stormwater runoff.</p>
Hillsborough-Wade	Right of way	Hillsborough-Wade Common #3	How will the University Club be compensated for their losses?	Due to the ownership and lease arrangements for this land, the issue of compensation for right of way acquisition is complex. NCDOT will work with the University Club, NCSU, and NCSU Foundation to explore potential options for relocation of University Club facilities through the right-of-way acquisition process and will continue to look for ways to reduce the project's right of way needs through final design.
Hillsborough-Wade	Right of way	Hillsborough-Wade Common #4	How will the University Club employees be compensated for loss of their jobs?	NCDOT does not work with individual employees of a business. It is the responsibility of the University Club to decide what amenities it will provide on their site after right of way acquisition, and the employees it needs. NCDOT will work with the University Club, NCSU, and NCSU Foundation to explore potential options for relocation of University Club facilities through the right-of-way acquisition process and will continue to look for ways to reduce the project's right of way needs through final design.
Hillsborough-Wade	Safety	Hillsborough-Wade Common #5	A safety wall should be built to protect the University Club, especially the pool.	Under any of the Detailed Study Alternatives, right of way fencing will be installed along the right of way boundary for the project. The University Club could construct their own walls or barriers adjacent to the right of way. For the Detailed Study Alternatives, the pavement of the off-ramp to Hillsborough St is approximately 150 feet from the pool.
Hillsborough-Wade	Right of way	Hillsborough-Wade Common #6	All the alternatives take too much land from Meredith College and would impact Meredith College commuter parking and athletic field. Can the project be shifted entirely off Meredith's campus?	Typically, detailed measures to minimize right of way are investigated during the final design process. NCDOT has heard the concerns from the public and area stakeholders regarding the preliminary designs at the Wade Ave and Hillsborough St interchanges and explored ways to minimize estimated right of way prior to final design, as presented in the FONSI. Efforts will continue through final design to minimize impacts.

**COMMON COMMENTS**

Location	Topic	Comment No.	Common Comment	Response
Hillsborough-Wade	Noise, Air quality	Hillsborough-Wade Common #7	The project will bring noise and fumes closer to the Meredith College campus .	<p>It should be noted that Meredith College is adjacent to existing I-440, and receives noise from the existing roadway. The proposed I-440 would move the mainlines of I-440 (which generate more noise compared to the ramps) farther away from campus, so the noise generated by the additional mainlines of traffic are countered by the relocation of the mainlines farther from campus. The Traffic Noise Report prepared for the Detailed Study Alternatives assessed traffic noise to the Meredith College campus. To account for Meredith College's context as a residential and educational institution, modeled uses on the campus included a dormitory (residential), academic buildings, and athletic practice field.</p> <p>The Oaks residences and the academic buildings on the western side of campus were included in the computer models of existing and future noise levels. These areas are predicted to have a 1-2 decibel increase from existing noise levels to 62-63 dBA Leq in the 2035 peak hour with any of the Detailed Study Alternatives. A 1-2 decibel increase is barely perceptible to the human ear. The predicted 2035 peak hour noise levels at The Oaks and the academic buildings would be below the 66 dBA Leq peak hour noise level at which FHWA regulations require consideration of noise abatement in residential areas and schools. Predicted year 2035 future noise levels on the athletic field would range from 62 dBA Leq to 70 dBA Leq without the project and 64 dBA Leq to 70 dBA Leq with the project. The athletic field area was evaluated for a noise wall. Based on the traffic noise assessment and the FHWA and NCDOT criteria used to evaluate the feasibility and reasonableness of a noise wall for a particular location, no noise walls are recommended adjacent to the Meredith College campus.</p> <p>Regarding vehicle emissions, the project is part of the region's 2040 Metropolitan Transportation Plan, which is evaluated in whole to ensure that implementation of the projects in the plan would not cause or contribute to any violations of the National Ambient Air Quality Standards for the region. For localized emissions of pollutants, the project is projected to improve traffic flow compared to the no-build alternative, which helps air quality by reducing idling vehicles.</p>
Hillsborough-Wade	Lighting	Hillsborough-Wade Common #8	The lighting masts for the proposed project will be a visual impact to the Meredith College campus and the lights may cause light pollution on campus.	<p>A Lighting Scope of Work will be provided to the design-build teams. Standard 100-ft high mast poles and 45-ft light poles generally are used for interchange lighting design. However, other types of lighting can be considered where warranted, such as 30-ft mounting height single-arm light standards and/or twin-arm light standards . The 30-ft light masts and the light fixtures can be painted black to make them less visually obtrusive. The lighting design requirements will specify use of International Dark-Sky Association (IDA) Approved Lighting Fixtures. The IDA's Fixture Seal of Approval program certifies outdoor lighting fixtures as being Dark Sky Friendly, meaning that they minimize glare while reducing light trespass and skyglow. Lighting design will also specify light fixtures to minimize the quantity of backlight, uplight and glare from the fixtures.</p> <p>During construction, the NCDOT Roadway Lighting Squad is available to come on site to collect ground level foot-candle measurements prior to and during construction for comparison and provide this information to Meredith College. Balloon light towers or LED light towers can be considered as an alternative to the traditional metal halide construction light tower.</p>

## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Hillsborough-Wade	Historic resources and land use	Hillsborough-Wade Common #9	The construction and operation of all three alternatives for the Wade Avenue/Hillsborough Street area will negatively affect the area of Meredith College eligible for listing on the National Register of historic places. The project would compromise Meredith College's ability to continue growing in a manner consistent with the college's 126-year mission and campus master plan, "a state-recognized Designed Historic Landscape," that we have followed for over 50 years.	In a letter dated August 2, 2017, the NC Historic Preservation Office (NC HPO) identified an expanded boundary for the portion of Meredith College determined eligible for the National Register of Historic Places, as shown in the FONSI. On August 22, 2017, NC HPO reviewed the preliminary designs presented in the EA in relation to the expanded boundary and determined that the proposed Detailed Study Alternatives would have No Effect (One Flyover) or No Adverse Effect (Slight Detour and Two Flyovers) on the historic property. As a condition of the determination of No Adverse Effect for the alternatives on the historic area of Meredith College, NC HPO requires that NCDOT prepare and install a landscape plan along the western side of Meredith College campus in consultation with Meredith College. This also will help mitigate changes in the visual landscape caused by the project. Additional updates regarding the historic portion of Meredith College are included in the FONSI.
Hillsborough-Wade	Design	Hillsborough-Wade Common #10	Eliminate the interchange at Hillsborough Street.	The interchange at Hillsborough St is not proposed to be eliminated. Local government stakeholders responsible for transportation planning for the region, the Capital Area Metropolitan Planning Organization (CAMPO) and City of Raleigh, support retaining the interchange. Eliminating this interchange would redistribute this traffic to other area roadways such as Wade Ave, Faircloth St, Western Blvd, and Blue Ridge Rd, which already carry high volumes of traffic.
Hillsborough-Wade	Construction	Hillsborough-Wade Common #11	Construction noise and lights will impact students at Meredith College. How will construction noise be abated for the students who live in The Oaks residence hall? How will security of the campus be maintained during construction?	NCDOT will explore cost effective and practicable ways to reduce construction noise at night. Measures to reduce construction noise are discussed in Section 3.5.6 of the Environmental Assessment (EA). During construction, the public will be notified of upcoming construction activities through the regular construction updates expected to be released to the public. For example, on the Fortify project to reconstruct I-40, updates were released every Friday for the upcoming week. The construction area would be fenced off during construction. Any construction-related access needed through the Meredith College campus would not occur without the permission of and coordination with Meredith College. NCDOT will work with Meredith College during construction to address any security concerns.
Hillsborough-Wade	Parks and greenways	Hillsborough-Wade Common #12	What will happen to the Reedy Creek Greenway on the Meredith College campus?	The Reedy Creek Greenway will be replaced, as described in the FONSI. Temporary closures of short duration (e.g. days rather than weeks or months) are anticipated during construction, but will be minimized to the extent practicable.
Hillsborough-Wade	Public Transit	Hillsborough-Wade Common #13	The money for this project would be better spent for public transit, such as light rail or a subway system.	The proposed project is part of the overall set of transportation projects of all modes proposed for the Raleigh region. Funding for the project comes from the National Highway Performance Program and cannot be used for non-highway improvements. Transportation investments for the area are described in the region's current 2040 Metropolitan Transportation Plan, which plans for all modes of transportation for the next 25 years, including public transit. This long-range plan is prepared by the Capital Area Metropolitan Planning Organization (CAMPO). GoTriangle and GoRaleigh also are actively operating and planning transit services for the region.

## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Hillsborough-Wade	Visual resources and Land use	Hillsborough-Wade Common #14	The report does not address the visual impacts of highway infrastructure and flyover bridges on Meredith College's campus.	<p>Section 3.2 of the EA addresses visual resources both from I-440 and to I-440. The EA (page 3-10) also states that "At Meredith College, the view on the western side of campus would be changed to include new fill slopes under all alternatives and the single flyover ramp structure under the One Flyover Alternative and Slight Detour Alternative and the two flyover ramp structures under the Two Flyovers Alternative."</p> <p>It should also be noted that as a condition of the determination of No Adverse Effect for the Preferred Alternative on the historic area of Meredith College, the NC Historic Preservation Office requires that NCDOT prepare and install a landscape plan along the western side of Meredith College campus in consultation with Meredith College. This also will help mitigate changes in the visual landscape caused by the project.</p>
Hillsborough-Wade	Visual resources and Land use	Hillsborough-Wade Common #15	Move the roadway improvements east to avoid impacts to University Club property. Or inversely, move the roadway improvements more to the west to avoid impacts to Meredith College property.	<p>The proposed alignment of widened I-440 is shifted somewhat to the west (onto the University Club side) of the existing mainlines. There are many constraints in this area to the east and west and the proposed alignment "threads the needle" as best it can through the area.</p> <p><b>Shifting to the east.</b> Shifting the alignment east on top of existing I-440 would cause impacts at Method Community Park, which is also the Berry O'Kelly School Historic District. These resources are afforded special protection under federal laws. In addition, widening in this area on top of existing I-440 would make maintenance of traffic through the area during construction more difficult.</p> <p><b>Shifting more to the west.</b> Shifting more to the west would impact Museum Park, which is afforded special protection under federal laws. Shifting west also would require relocating the Reedy Creek pedestrian bridge and would impact several homes in the Meredith Woods neighborhood. In addition, shifting more to the west would bring the Wade Ave/I-440 interchange too close to the Wade Ave/Blue Ridge Rd interchange. At the Hillsborough St end, shifting the alignment farther west would impact the Oak Grove Cemetery near Ligon St, which has been determined eligible for listing on the National Register of Historic Places.</p>
Jones Franklin	Right of way	Jones Franklin Rd Common #1	Concern about the estimated relocation of 23 residences and the Learn With The Best special needs school.	Measures to reduce the right of way needs and relocations caused by the project will continue to be investigated through final design. NCDOT will follow their established processes for acquiring property and assisting residents and businesses in relocation, as described on page 3-4 of the EA. For renters and homeowners who are relocated by the project, NCDOT offers several programs to minimize the inconvenience of relocation. In addition, as stated on page 3-6 of the EA, NCDOT will work closely with the Learn with the Best private school to reduce the possibility of any lapse in availability of services to the community provided by this facility.
Jones Franklin	Design	Jones Franklin Common Rd #2	The proposed median to the north of I-440 extends too far north and prevents residents from turning left into and out of their driveways.	The addition of the median will improve traffic flow and make turning movements safer. Along Jones Franklin Rd north of I-440, there will be median breaks with U-turn opportunities at Barringer Rd and at the signalized ramp intersection. These two locations are approximately 750 feet apart. Changing the proposed concrete median north of Barringer Drive to a painted median was considered and recommended for inclusion into the project during final design.



## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Jones Franklin	Design	Jones Franklin Rd Common #3	The proposed median to the south that prevents left turns into and out of the Sonner Aquatic Facility is not safe or convenient.	The addition of the median will improve traffic flow and make turning movements safer. South of I-440, if no median is installed, vehicles wanting to turn left out of the Sonner Aquatic facility to head south would have to turn against two lanes of oncoming northbound traffic and then merge in with the two lanes of southbound traffic. With a median, traffic to/from the aquatic facility would travel slightly farther to the Denise Drive signalized intersection or to the u-turn provided to the north. In both locations, vehicles would be turning only with traffic going the same way. This is a safer configuration. However, the placement of median breaks south of I-440 will be reevaluated during final design.
Jones Franklin	Bicycles/ pedestrians	Jones Franklin Rd Common #4	Incorporate accommodations for bicycles and pedestrians.	The project would make improvements to Jones Franklin Road in the interchange area that include widening Jones Franklin Rd to four lanes with a median, adding sidewalks and bicycle lanes on both sides (subject to cost-sharing with the City of Raleigh), and accommodating a future multi-use path on the Jones Franklin Rd bridge over I-440.
Ligon	Bicycles/ pedestrians	Ligon St Common #1	This crossing needs to accommodate bicyclists and pedestrians.	The two-lane bridge under the Build Bridge to South Alternative and the Build Bridge to North Alternative would have an anticipated 25 mph speed limit and also have sidewalks. The low speed and relatively low volume of traffic on this roadway would be a safe alternative for bicycles, especially compared to the Extend Existing Traffic Culvert Alternative. The Extend Existing Traffic Culvert Alternative would not include any pedestrian or bicycle accommodations.
Ligon	Traffic	Ligon St Common #2	The bridge alternatives will increase traffic in the neighborhood.	A small area traffic forecast was completed for the Method neighborhood area, as described in Section 4.4 of the EA under the subheading Method Neighborhood. As discussed on EA Page 4-8, Ligon St would see increased traffic if a two-lane bridge were built and the road was connected to Blue Ridge Rd. However, traffic on Method Rd through the heart of the neighborhood would be about the same with or without the project (about 9,300 to 9,500 vehicles per day in 2035) as any additional traffic that may be attracted to use Method Rd as a cut-through is offset by traffic that would now stay on Ligon St to/from Gorman St as a more convenient route.
Ligon	Alternatives	Ligon St Common #3	Close the culvert, it is out of date and unnecessary and a waste of money.	The existing Ligon St traffic culvert provides an important connection between the historic Oak Grove Cemetery and the churches and residents of the Method neighborhood. Ligon St also provides a connection between NCSU research facilities. In addition, the City of Raleigh has future plans to connect Ligon St to Blue Ridge Rd. It is not practical to entirely close this connection.

## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Melbourne	Design	Melbourne Rd Common #1	Keep the Melbourne Road bridge but eliminate the interchange ramps.	<p>NCDOT balances multiple factors, including public input, in developing Detailed Study Alternatives for a project and in selecting the alternatives to implement. The Detailed Study Alternatives at Melbourne Road and the decision to retain the interchange ramps were developed based on a number of factors, including considerations related to roadway design, impacts from the proposed alternatives, traffic operations, and input from the public and agencies such as the Federal Highway Administration, City of Raleigh, and the Capital Area Metropolitan Planning Organization. Public input was received at the two open house meetings as well as at several small group meetings with local organizations (for example, the West Citizens Advisory Council and the Combs Elementary School PTA).</p> <p>In general, urban highly developed areas benefit from as much access and connectivity as practicable to provide options for travelers. No options that remove the interchange ramps are planned at this time. Additional information about the final designs and construction activities will be shared with the public by NCDOT and the design-build team as the project progresses.</p>
Melbourne	Design	Melbourne Rd Common #2	Keep the Deboy St connection open on the Melbourne Rd off ramp from westbound I-440	The connection of Deboy St to the off-ramp will be closed because current FHWA policy does not allow for breaks in access control along a freeway ramp for features such as side streets or driveways to connect to a ramp.
Melbourne	Design	Melbourne Rd Common #3	Traffic signals are not needed at the ramp intersections with Melbourne Rd	The traffic signals shown on the Public Hearing Map at the I-440 ramp intersections at Melbourne Rd were incorrect. Traffic operations analysis for the year 2035, updated for the year 2040 in the Finding of No Significant Impact (FONSI), recommend stop signs as sufficient for these intersections. Traffic signals will not be installed in these locations as part of the project.
Melbourne	Design	Melbourne Rd Common #4	Do not widen Melbourne Road.	The Detailed Study Alternatives at the Melbourne Rd interchange shown in the EA and the Public Hearing both proposed widening the bridge over I-440 to three lanes to accommodate a left turn lane for the on-ramp to eastbound I-440 and a left turn lane at Kaplan Rd. During the public review period, the City of Raleigh requested that Melbourne Rd remain two lanes wide with bicycle lanes and sidewalks. This design change will be made during final design, as discussed in the Finding of No Significant Impact (FONSI).
Melbourne	Design	Melbourne Rd Common #5	Do not add bicycle lanes to Melbourne Road.	Sidewalks and lane width for bicycle lanes on the bridge are included at the request of the City of Raleigh. Melbourne Rd is a signed bicycle route.
Western	Alternatives	Western Blvd Common #1	Were any other designs considered? The proposed design will be too confusing to drivers.	<p>The Double Crossover Diamond was the best solution to carry the projected traffic volumes and turning movements at this interchange location. Pages 2-9 and 2-10 of the EA describe the other alternatives initially evaluated for the Western Blvd interchange and the reasons they were eliminated from further study.</p> <p>It may take drivers a few times navigating a double crossover diamond until they feel comfortable, but these interchanges are well-signed. The double crossover diamond looks more complicated from above than when actually driving it. Over time, drivers will become familiar with the interchange design, as they have at other locations around the state. There is a poster titled How to Navigate A Double Crossover Diamond available on the project website that shows how to navigate a double crossover diamond. The project website is <a href="http://www.ncdot.gov/projects/i-440improvements">www.ncdot.gov/projects/i-440improvements</a>. In addition, NCDOT has a video on their YouTube channel showing how this type of interchange works.</p>

## COMMON COMMENTS

Location	Topic	Comment No.	Common Comment	Response
Western	Bicycles/ pedestrians	Western Blvd Common #2	The interchange needs to accommodate bicyclists and pedestrians.	There is an existing multi-use path through the interchange area. The multi-use path will be replaced and sidewalk will be constructed to accommodate pedestrians and bicyclists through the proposed interchange. Options for the path and sidewalk include constructing them along the sides of Western Blvd or through the median. This will be decided during final design.
Western	Cost/funding	Western Blvd Common #3	The proposed design is too expensive.	Much of the cost associated with this interchange is the need to reconstruct the stormwater drainage system, which would be necessary for each alternative.

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# COMMENTS AND RESPONSES

*Note: Comment letters and responses are bound separately. Only the table of contents is provided in Volume 1. Volume 2 has the complete Appendix C.*

## C.3 Agencies and Organizations

**Table C3-1: Agency and Organization Comments**

Doc. No.	Name	Agency/ Organization	Date	Page No.
A-001	Best, Crystal	State Environmental Review Clearinghouse	8/17/2017	C3-21
A-002	Hardison, Lyn	NC Department of Environmental Quality (NCDEQ)	8/10/2017	C3-21
A-003	Wilson, Travis	NC Wildlife Resources Commission (NCWRC)	7/24/2017	C3-22
A-004	Ridings, Rob	NC Division of Water Resources (NCDWR) Transportation Permitting Branch	7/21/2017	CS-22
A-005	Hunneke, William	NC Division of Waste Management (NCDWM) Hazardous Waste Section	7/21/2017	C3-24
A-006	Tatum, Katie	NC DWM Inactive Hazardous Sites Branch - Central Unit	7/24/2017	C3-25
A-007	Hammonds, Drew	NC DWM Solid Waste Section	7/17/2017	C3-26
A-008	Not given	NC DEQ Raleigh Regional Office	8/4/2017	C3-26
A-009	Desai, Rupal	NC Department of Transportation (NCDOT) Transportation Planning Branch	7/26/2017	C3-28
A-010	Mason, Suzanne	NC Natural Heritage Program (NHP)	7/19/2017	C3-28
A-011	Richardson, Greg	NC Department of Administration (NCDOA) - Commission of Indian Affairs	7/24/2017	C3-29
A-012	Brubaker, John	NCDEQ Division of Emergency Management - Floodplain Management Program	7/17/2017	C3-29
A-013	Wilber, Pace	National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)	7/26/2017	C3-30

**Table C3-1: Agency and Organization Comments**

Doc. No.	Name	Agency/ Organization	Date	Page No.
A-014	Jordan, Gary	US Fish and Wildlife Service (USFWS)	7/20/2017	C3-30
A-015	Cleveland, Lydia	North Carolina Museum of Art (NCMA)	8/22/2017	C3-31
A-016	Blank, Gary	NCSU Faculty Senate	8/20/2017	C3-32
A-017	Ivankovich, James	University Club	8/11/2017	C3-32
A-018	Whitehouse, Joe	Hillsborough Street Community Service Corporation	No date	C3-33
A-019	Levin, Stuart	Blue Ridge Corridor Alliance (BRCA)	9/7/2017	C3-34
A-020	Haywood, Emmett	Nicholls & Crampton on behalf of NCSU University Club	9/7/2017	C3-34
A-021	Gurganus, Steve	Womble Carlyle Sandridge & Rice, LLP on behalf of Meredith College	9/8/2017	C3-37
A-022	Campbell, Sharon	Meredith College Facilities Director	9/7/2017	C3-41
A-023	Withrow, Kenneth	Capital Area Metropolitan Planning Organization (CAMPO)	9/12/2017	C3-42



# COMMENTS AND RESPONSES

*Note: Public Hearing transcript and responses are bound separately. Only the table of contents is provided in Volume 1. Volume 2 has the complete Appendix C.*

## C.4 Public Hearing Transcript

**Table C4-1: Public Hearing Comments**

Doc. No.	Name	Date	Page No.
T-001	Watts, Mimi	8/8/2017	C4-14
T-002	Watts, Leslie; of University Club	8/8/2017	C4-14
T-003	Allen, President Jo; of Meredith College	8/8/2017	C4-14
T-004	Herget, Barlow	8/8/2017	C4-15
T-005	Crisp, James	8/8/2017	C4-15
T-006	Tonelli, Alan	8/8/2017	C4-16
T-007	Stuart, Jane	8/8/2017	C4-16
T-008	Cates, Jennifer	8/8/2017	C4-16
T-009	Taylor, Anna	8/8/2017	C4-16
T-010	Abplanalp, John	8/8/2017	C4-17
T-011	Weaver, Al	8/8/2017	C4-17
T-012	Nicholas, Harry	8/8/2017	C4-18
T-013	Sawhney, Anita	8/8/2017	C4-18
T-014	Flynn, Greg	8/8/2017	C4-18
T-015	Winslow, Alexander	8/8/2017	C4-19
T-016	Winslow, William	8/8/2017	C4-19
T-017	Clifford, Blythe	8/8/2017	C4-19
T-018	Morse, Edie	8/8/2017	C4-19
T-019	Horton, Donna	8/8/2017	C4-20
T-020	McDonald, Janet	8/8/2017	C4-20
T-021	Smith, William	8/8/2017	C4-20
T-022	Millican, Kathryn	8/8/2017	C4-21
T-023	Kempf, Greg	8/8/2017	C4-21
T-024	Lorden, Sharon	8/8/2017	C4-22
T-025	Gregory, Edwin	8/8/2017	C4-23
T-026	Gehringer, Ed	8/8/2017	C4-23
T-027	Everett, Justus	8/8/2017	C4-24
T-028	Miller, Scott	8/8/2017	C4-24
T-029	Blanchard, Meg	8/8/2017	C4-24
T-030	White, Jay	8/8/2017	C4-25
T-031	Edgar, Cary	8/8/2017	C4-25
T-032	Clark, Kately	8/8/2017	C4-26
T-033	Norris, George	8/8/2017	C4-26

**Table C4-1: Public Hearing Comments**

Doc. No.	Name	Date	Page No.
T-034	Moore, Richard	8/8/2017	C4-27
T-035	Dolan, Louise	8/8/2017	C4-27
T-036	Hansen, John	8/8/2017	C4-27





# COMMENTS AND RESPONSES

*Note: Comment forms and responses are bound separately. Only the table of contents is provided in Volume 1. Volume 2 has the complete Appendix C.*

## C.5 Comment Forms

**Table C5-1: Comment Forms**

Doc. No.	Name	Date	Page No.
C-001	Blanchard, Margaret	8/8/2017	C5-10
C-002	Brummett, Shannon	8/8/2017	C5-11
C-003	Carter, Thomas	8/8/2017	C5-11
C-004	Danskin, Bruce and Phyllis	8/8/2017	C5-12
C-005	Elliot, Lori	8/8/2017	C5-12
C-006	Freemon, Alexander	8/8/2017	C5-13
C-007	Gilstrap, Jesse	8/8/2017	C5-14
C-008	Green, Sarah	8/8/2017	C5-15
C-009	Greene, Lesia	8/8/2017	C5-16
C-010	Gurganus, Susan	8/8/2017	C5-17
C-011	Herget, Barlow	8/8/2017	C5-17
C-012	Horton, Donna	8/8/2017	C5-19
C-013	Imber, Robert	8/8/2017	C5-20
C-014	Jones, Lori	8/8/2017	C5-20
C-015	Mandell, Lee and Martha	8/8/2017	C5-21
C-016	Miller, Scott	8/8/2017	C5-22
C-017	Morton, Doug	8/8/2017	C5-23
C-018	Oakley, Dayle	8/8/2017	C5-23
C-019	Perryman, Peyote	8/8/2017	C5-24
C-020	Quinn, J. Elaine	8/8/2017	C5-25
C-021	Quinn, Michael	8/8/2017	C5-26
C-022	Rindge, Karen	8/8/2017	C5-27
C-023	Tharp, Alan	8/8/2017	C5-28
C-024	Watts, Leslie	8/8/2017	C5-29
C-025	Wheeler, Steve	8/8/2017	C5-29
C-026	None given	8/8/2017	C5-26
C-027	None given	8/8/2017	C5-27
C-028	None given	8/8/2017	C5-28
C-029	None given	8/8/2017	C5-29
C-030	None given	8/8/2017	C5-32
C-031	None given	8/8/2017	C5-32
C-032	APG	8/8/2017	C5-33
C-033	None given	8/8/2017	C5-33
C-034	None given	8/8/2017	C5-34

**Table C5-1: Comment Forms**

Doc. No.	Name	Date	Page No.
C-035	None given	8/8/2017	C5-34
C-036	None given	8/8/2017	C5-35
C-037	Michniak, Liliane	No date	C5-35
C-038	Worsley, George	No date	C5-36
C-039	Walters, Linda	No date	C5-37
C-040	Hartman, Kinny	No date	C5-38
C-041	Clifford, William	No date	C5-39
C-042	Tharp, Kathryn	No date	C5-40
C-043	Juntilla, Karen	No date	C5-41
C-044	Peterson, Stephen	8/28/2017	C5-42
C-045	Walmer, Alexis	9/5/2017	C5-43
C-046	Greer, Hattie	9/5/2017	C5-44
C-047	None given	9/5/2017	C5-45
C-048	Wentz, Shirley	8/31/2017	C5-46
C-049	King, Phil and Poole, Sandra	No date	C5-46
C-050	Fisher, Phillip	No date	C5-48
C-051	Kress, Stephen	No date	C5-48



# COMMENTS AND RESPONSES

*Note: Emails/letters and responses are bound separately. Only the table of contents is provided in Volume 1. Volume 2 has the complete Appendix C.*

## C.6 Emails and Letters

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-001	Wiley, Lisa	8/7/2017	C6-27
EL-002	Goodwin, Shafi	8/8/2017	C6-27
EL-003	Leming, Martie	8/8/2017	C6-28
EL-004	Erb, Kelly	8/9/2017	C6-29
EL-005	Lamb, Cathy	8/9/2017	C6-29
EL-006	Lee, Shakia	8/9/2017	C6-30
EL-007	Leissner, Jenna	8/9/2017	C6-30
EL-008	Manchester, Jennifer	8/9/2017	C6-30
EL-009	O'Connor, Trinnie	8/9/2017	C6-30
EL-010	Schaffer, Dianne	8/9/2017	C6-31
EL-011	Schmidl, Harald	8/9/2017	C6-31
EL-012	Selouane, Dr. Chassie	8/9/2017	C6-31
EL-013	Silber, Eva	8/12/2017	C6-31
EL-014	Yow, Haley	8/9/2017	C6-32
EL-015	Arruda, Maggie	8/10/2017	C6-32
EL-016	Jones-Renaud, Lindsey	8/10/2017	C6-33
EL-017	Manchester, Allie	8/10/2017	C6-33
EL-018	Reis, Mary	8/10/2017	C6-34
EL-019	Schneider, Bethany	8/10/2017	C6-34
EL-020	Stiff, Elizabeth	8/10/2017	C6-35
EL-021	Taylor, Callie	8/10/2017	C6-35
EL-022	Weston, Suzanne	8/10/2017	C6-35
EL-023	Wilson, Taylor	8/10/2017	C6-35
EL-024	Blevins, Kristin	8/11/2017	C6-35
EL-025	Jones, Todd	8/11/2017	C6-36
EL-026	Penn, Brooks	8/12/2017	C6-36
EL-027	Silber, Eva	8/12/2017	C6-37
EL-028	Deerhake, Bill	8/13/2017	C6-37
EL-029	Regan, Joseph	8/13/2017	C6-38
EL-030	Stager, Stan	8/13/2017	C6-39
EL-031	Barwick, Ben	8/14/2017	C6-40
EL-032	Mims, Pam	8/14/2017	C6-41
EL-033	Taylor, Allison	8/14/2017	C6-41
EL-034	Aldridge, Tiffany	8/10/2017	C6-42

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-035	Bowers, Jane	8/11/2017	C6-42
EL-036	Napier, Shirley	8/11/2017	C6-42
EL-037	Roberts, Susan	8/13/2017	C6-42
EL-038	Houser, Amanda	8/14/2017	C6-43
EL-039	Fritschel, Betsy	8/14/2017	C6-43
EL-040	Mock, Caroline	8/15/2017	C6-44
EL-041	Taylor, Morgan	8/15/2017	C6-44
EL-042	Troxler, Heather	8/15/2017	C6-44
EL-043	Padgett, Karen	8/15/2017	C6-45
EL-044	Leith, Carolyn	8/15/2017	C6-45
EL-045	Rippy, Janet	8/16/2017	C6-46
EL-046	Newberry, Courtney	8/16/2017	C6-46
EL-047	Anderson, Kathy	8/16/2017	C6-46
EL-048	Lowe, Cynthia	8/16/2017	C6-47
EL-049	McClendon, Rebecca	8/17/2017	C6-47
EL-050	None given	8/17/2017	C6-47
EL-051	Hurt, Stephanie	8/15/2017	C6-48
EL-052	Cooper, Josephine	8/17/2017	C6-49
EL-053	Fann, Talia	8/18/2017	C6-49
EL-054	Mathews, Sidney	8/16/2017	C6-50
EL-055	Fritschel, Betsy	8/17/2017	C6-50
EL-056	Willits, Dan	8/18/2017	C6-51
EL-057	Dove, Elizabeth	8/17/2017	C6-51
EL-058	Pitts, Marcia	8/18/2017	C6-52
EL-059	Maddalena, Damian	8/17/2017	C6-53
EL-060	Thackston, Carolyn	8/20/2017	C6-53
EL-061	Bryd, Amy	8/20/2017	C6-53
EL-062	Jacobson, Laura	8/20/2017	C6-54
EL-063	Rawls, Dana	8/21/2017	C6-54
EL-064	Herrmann, Natalie	8/19/2017	C6-55
EL-065	McLean, Brenda	8/19/2017	C6-56
EL-066	Kirk, Phil	8/22/2017	C6-56
EL-067	Bateman, Susan	8/21/2017	C6-57
EL-068	Grodi, Lauren	8/21/2017	C6-57



**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-069	Garcia, Diane	8/21/2017	C6-58
EL-070	Garcia, Diane	8/21/2017	C6-58
EL-071	Henson, Michelle	8/22/2017	C6-59
EL-072	Aycock, Shannon and Matthew	8/22/2017	C6-59
EL-073	Sathoff, Rich	8/22/2017	C6-60
EL-074	Leming, Chris	8/22/2017	C6-61
EL-075	Davis, Paul	8/22/2017	C6-62
EL-076	Cleveland, Lydia	8/22/2017	C6-63
EL-077	Strickler, Nathan	8/22/2017	C6-63
EL-078	Leming, Chris	8/22/2017	C6-64
EL-079	McDonald, Virginia	8/21/2017	C6-65
EL-080	Raschke, Greg	8/21/2017	C6-66
EL-081	Tolin, Parker	8/21/2017	C6-66
EL-082	Pfeifer, Amy	8/21/2017	C6-67
EL-083	Seaton, Lacey	8/21/2017	C6-67
EL-084	Seaton, Robert	8/21/2017	C6-68
EL-085	Washburn, Jeanne	8/21/2017	C6-68
EL-086	Kelly	8/21/2017	C6-69
EL-087	Attride, Roy	8/21/2017	C6-69
EL-088	Edwards, Carolyn	8/20/2017	C6-70
EL-089	Kelly, Ellen	8/20/2017	C6-70
EL-090	Blank, Gary	8/20/2017	C6-70
EL-091	Morillo, John	8/20/2017	C6-71
EL-092	Pitts, Dennis	8/20/2017	C6-71
EL-093	Buckley, Michael	8/16/2017	C6-72
EL-094	Suski, Stephanie	8/19/2017	C6-73
EL-095	Wahl, Mary	8/16/2017	C6-73
EL-096	McEvoy, Steve and Lynne	8/19/2017	C6-74
EL-097	Hoyle, Michael	8/19/2017	C6-74
EL-098	Hampton, Natalie	8/13/2017	C6-75
EL-099	Dickey, David	8/12/2017	C6-75
EL-100	Paro, Sarah	8/11/2017	C6-76
EL-101	Maynard, Linda	8/7/2017	C6-76
EL-102	Joyner, Ann	7/31/2017	C6-76

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-103	Switzer, Mike	8/18/2017	C6-76
EL-104	Snyder, Rosalyn	8/18/2017	C6-76
EL-105	Paumier, Jim	8/23/2017	C6-77
EL-106	Sutton, Dana	8/22/2017	C6-77
EL-107	Boone, Charlotte	8/24/2017	C6-78
EL-108	Davis, Suzanne	No date	C6-78
EL-109	Graham, Robert	8/17/2017	C6-79
EL-110	Bumgardner, Henry	8/15/2017	C6-79
EL-111	Toney, Derrell	8/17/2017	C6-80
EL-112	Brooks, Wilton	8/16/2017	C6-80
EL-113	Hines, Jacqueline	8/16/2017	C6-81
EL-114	Murphy, Leigh	8/16/2017	C6-81
EL-115	Wenstley, Ephrian	8/16/2017	C6-82
EL-116	Tonelli, Alan	No date	C6-82
EL-117	Crossno, Jette	8/15/2017	C6-83
EL-118	Lin, Michael	8/16/2017	C6-83
EL-119	Miller, Troy	8/17/2017	C6-84
EL-120	Cavanuagh, Christian	8/16/2017	C6-84
EL-121	Miller, Madison	8/15/2017	C6-85
EL-122	Taylor, Stephen	8/16/2017	C6-85
EL-123	Gales, Emily	8/16/2017	C6-86
EL-124	Blount, Wallace	8/16/2017	C6-86
EL-125	Shoenthaler, Jerod	8/17/2017	C6-87
EL-126	Anderson, Kathryn	8/21/2017	C6-87
EL-127	O'Brien, Bob	8/28/2017	C6-88
EL-128	Rahill, Tom	8/29/2017	C6-88
EL-129	Lorden, Sharon	8/28/2017	C6-89
EL-129a	Lorden, Sharon	8/31/2017	C6-90
EL-130	Urquhart, Richard	8/30/2017	C6-91
EL-131	Webb, Emerita Betty	8/30/2017	C6-91
EL-132	Narron, Holly	8/30/2017	C6-92
EL-133	Jones, Fayette	8/30/2017	C6-93
EL-134	Nance, Beth	8/30/2017	C6-93
EL-135	Dupree, Betsy	8/30/2017	C6-93

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-136	Shaw, Meredith	8/30/2017	C6-94
EL-137	Sams, Anne	8/30/2017	C6-94
EL-138	James, Cathy	8/30/2017	C6-94
EL-139	Hill, Genevieve	8/30/2017	C6-95
EL-140	Bayard, Lisa	8/30/2017	C6-96
EL-141	Dick, Lara	8/30/2017	C6-96
EL-142	Wall, Linda	8/30/2017	C6-96
EL-143	Brooks, Katherine	8/30/2017	C6-97
EL-144	Bell, Carol Ann	8/30/2017	C6-97
EL-145	Starke, Mary	8/30/2017	C6-98
EL-146	Wagoner, Carol	8/30/2017	C6-99
EL-147	Herring, Margaret	8/30/2017	C6-99
EL-148	Cash, Kelly	8/30/2017	C6-99
EL-149	Miller, Joyce	8/30/2017	C6-99
EL-150	Washburn, Michael	8/31/2017	C6-99
EL-151	Tyndall, Mary	8/31/2017	C6-100
EL-152	High, Mark and Ruth	8/31/2017	C6-101
EL-153	Swindel, Meredith	8/31/2017	C6-101
EL-154	Noah	8/31/2017	C6-102
EL-155	Quincy	8/31/2017	C6-102
EL-156	Godwin, Betty	9/1/2017	C6-103
EL-157	Cope, Tonya	9/1/2017	C6-103
EL-158	Blaylock, Ted	9/2/2017	C6-104
EL-159	Aldridge, David	9/3/2017	C6-104
EL-160	Mattox, Isabel	9/1/2017	C6-104
EL-161	Squires, Carla	9/5/2017	C6-105
EL-162	Miller, Sam	9/6/2017	C6-105
EL-163	Corkey, William	9/6/2017	C6-107
EL-164	Carroll, Beth	No date	C6-107
EL-165	Ostrowski, Cathie	9/5/2017	C6-108
EL-166	Travis, Joseph	9/5/2017	C6-108
EL-167	Dossenbach, Mary	9/5/2017	C6-109
EL-168	Belvin, Dee	9/5/2017	C6-109
EL-169	Fritschel, Betsy	9/5/2017	C6-109

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-170	Spitzer, Silda	9/5/2017	C6-110
EL-171	Padgett, Karen	9/5/2017	C6-110
EL-172	McLean, Jennifer	9/5/2017	C6-110
EL-173	Hite, Sheila	9/5/2017	C6-110
EL-174	Mann, Barbara	9/5/2017	C6-110
EL-175	High, Nancy	9/5/2017	C6-111
EL-176	Leathers, Crystal	9/5/2017	C6-111
EL-177	McDonald, Florence	9/5/2017	C6-111
EL-178	Highfill, Hilda	9/5/2017	C6-112
EL-179	Carter, Carolyn	9/5/2017	C6-112
EL-180	Parker, Sarah	9/5/2017	C6-112
EL-181	Ashbaugh, Maria	9/5/2017	C6-112
EL-182	Williams, Peggy	9/5/2017	C6-113
EL-183	Mitchell, Beverly	9/5/2017	C6-113
EL-184	Ibrahim, Nedda	9/5/2017	C6-113
EL-185	Bramlett, Anne	9/5/2017	C6-113
EL-186	Worley, Kimberly	9/5/2017	C6-114
EL-187	Dermid, Jo	9/6/2017	C6-114
EL-188	Williams, Judy	9/6/2017	C6-115
EL-189	Rabon, Florence	9/6/2017	C6-115
EL-190	McGee, Anne	9/6/2017	C6-116
EL-191	Woodlief, Patsy	9/6/2017	C6-116
EL-192	Mosely, Mae	9/6/2017	C6-116
EL-193	Sullivan, Teresa	9/6/2017	C6-116
EL-194	Jacobson, Laura	9/6/2017	C6-116
EL-195	Schlabach, Laura	9/6/2017	C6-117
EL-196	Ferguson, Melinda	9/6/2017	C6-118
EL-197	Holec, Susan	9/6/2017	C6-118
EL-198	Benjamin, Nicole	9/6/2017	C6-118
EL-199	Cagle, Sandra	9/6/2017	C6-118
EL-200	Massey, Sarah	9/6/2017	C6-119
EL-201	Staples, Shirley	9/6/2017	C6-119
EL-202	Allen, Hilary	9/7/2017	C6-120
EL-203	Hawley, Suzanne	9/3/2017	C6-120

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Doc No.	Name	Date	Page No.
EL-204	Osborne, Kim	8/22/2017	C6-121
EL-205	Coltrane, Suzanne	9/7/2017	C6-121
EL-206	Schrum, Betsy	9/7/2017	C6-122
EL-207	Thomas, Deborah	9/7/2017	C6-122
EL-208	Gregory, Raven	9/7/2017	C6-122
EL-209	Hayes, Leslie	9/7/2017	C6-122
EL-210	None given	9/7/2017	C6-122
EL-211	Roessler, Camden	9/7/2017	C6-123
EL-212	Vincent, Maria	9/7/2017	C6-123
EL-213	Burnette, Susan	9/7/2017	C6-123
EL-214	League, Sarah	9/7/2017	C6-123
EL-215	Goolishian, Riley	9/7/2017	C6-124
EL-216	Morgan, Candice	9/7/2017	C6-125
EL-217	James, Ann	9/8/2017	C6-125
EL-218	Bowers, Jane	9/7/2017	C6-126
EL-219	Ward, Ann	9/7/2017	C6-126
EL-220	Godwin, Cindy	9/7/2017	C6-126
EL-221	Bailey, Terri	9/7/2017	C6-127
EL-222	Peeler, Karen	9/7/2017	C6-127
EL-223	Summerlin, Fran	9/7/2017	C6-127
EL-224	Lynch, Carolyn	9/7/2017	C6-127
EL-225	McWhorter, Susan	9/7/2017	C6-127
EL-226	Shulby, Mary	9/7/2017	C6-128
EL-227	Honeycutt, Jenny	9/7/2017	C6-128
EL-228	Minnich, Ellen	9/7/2017	C6-128
EL-229	Sullivan, Charlotte	9/7/2017	C6-128
EL-230	Gould, Alan	9/7/2017	C6-129
EL-231	Weaver, Steve	9/6/2017	C6-129
EL-232	Lorden, Shawn	9/5/2017	C6-129
EL-233	Beal, Johnny	9/8/2017	C6-131
EL-234	Moore, Ruth	9/8/2017	C6-132
EL-235	Moyer, Joseph and Madeline	9/5/2017	C6-133
EL-236	Newlin, Patricia	9/9/2017	C6-135
EL-237	Russell, Dale	9/8/2017	C6-136

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-238	Smith, Cleo	9/8/2017	C6-136
EL-239	Duncan, Phyllis	9/8/2017	C6-137
EL-240	Butler, Kathryn	9/8/2017	C6-137
EL-241	Moore, Amy	9/8/2017	C6-138
EL-242	Whitaker, Mary	9/8/2017	C6-138
EL-243	Conyers, Deborah	9/8/2017	C6-138
EL-244	Jones, Alexis	9/8/2017	C6-138
EL-245	Bobynec, Karen	9/8/2017	C6-139
EL-246	Poole, Stevi	9/8/2017	C6-139
EL-247	Hazelrigg, Julie-Kate	9/8/2017	C6-139
EL-248	Hoffmann, Alma	9/8/2017	C6-139
EL-249	Debo, Marlene	9/8/2017	C6-140
EL-250	Jones, Dottie	9/8/2017	C6-140
EL-251	Wall, Ann	9/8/2017	C6-140
EL-252	Maxwell, Jim	9/7/2017	C6-141
EL-253	Wicker, Mary	9/7/2017	C6-141
EL-254	Baker, Mary	9/7/2017	C6-142
EL-255	Williams, Zelma	9/7/2017	C6-142
EL-256	Lail, Matt	9/7/2017	C6-142
EL-257	Dishart, Carol	9/7/2017	C6-143
EL-258	Close, Sandra	9/7/2017	C6-143
EL-259	Breen, Kate	9/7/2017	C6-144
EL-260	Falana, Barbara	9/7/2017	C6-144
EL-261	Skipper, Joel	9/7/2017	C6-144
EL-262	Crowe, Laine	9/7/2017	C6-144
EL-263	Hunter, Nancy	9/7/2017	C6-145
EL-264	Woodson, Anderson	9/7/2017	C6-145
EL-265	Harris, Jessica	9/7/2017	C6-145
EL-266	Long, Sheryl	9/7/2017	C6-145
EL-267	Squires, Hannah	9/7/2017	C6-146
EL-268	Scott, Kelly	9/7/2017	C6-146
EL-269	Fonville, Elizabeth	9/7/2017	C6-146
EL-270	Gardner, Steve	9/7/2017	C6-147
EL-271	Maxwell, Leslie	9/7/2017	C6-147

**Table C6-1: Email and Letter Comments**

Doc No.	Name	Date	Page No.
EL-272	Watson, Mary	9/7/2017	C6-148
EL-273	Kirby, Ellen	9/7/2017	C6-148
EL-274	Moore, Kim	9/7/2017	C6-148
EL-275	Truelove, Bonnie	9/7/2017	C6-148
EL-276	Bryan, Julia	9/7/2017	C6-149
EL-277	Fleming, Olivia	9/7/2017	C6-149
EL-278	Mathews, Perri	9/7/2017	C6-150
EL-279	Letchworth, Suzanne	9/7/2017	C6-150
EL-280	Glover, Lucinda	9/7/2017	C6-150
EL-281	Hoyle, Felicia	9/7/2017	C6-151
EL-282	Brown, Myra	9/7/2017	C6-151
EL-283	Troxler, Heather	9/7/2017	C6-152
EL-284	Bumgardner, Chrissie	9/7/2017	C6-152
EL-285	Pierce, Betsy	9/7/2017	C6-153
EL-286	Parker, Camille	9/7/2017	C6-153
EL-287	Kinneer, John	9/8/2017	C6-154
EL-288	Pfeiffer, Melinda	9/8/2017	C6-154
EL-289	Marchi, Beverly	9/8/2017	C6-155
EL-290	Patty, Richard	9/8/2017	C6-155
EL-291	Densmore, Walt	9/8/2017	C6-155
EL-292	Creech, Worth	9/8/2017	C6-155
EL-293	Duncan, Rebecca	9/11/2017	C6-156
EL-294	Duncan, Phyllis	9/7/2017	C6-156
EL-295	Mattox, Isabel	9/8/2017	C6-157
EL-296	Hawley, Suzanne	9/7/2017	C6-157
EL-297	Washburn, Michael	9/7/2017	C6-158
EL-298	Johnston, David	9/6/2017	C6-158
EL-299	Everett, Justus	9/8/2017	C6-159
EL-300	Sparks, Linda	9/6/2017	C6-160
EL-301	Muse, Meredith	8/31/2017	C6-160
EL-302	Washburn, Michael	8/31/2017	C6-161
EL-303	Paul, Helen	8/31/2017	C6-161
EL-304	Goodwin, Dorothy	9/8/2017	C6-162
EL-305	Moore, Brandon	9/8/2017	C6-162

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Doc No.	Name	Date	Page No.
EL-306	Shields, Grady	8/30/2017	C6-164
EL-307	Sconfienza, Ed	8/29/2017	C6-166
EL-308	Danskin, Phyllis	7/23/2017	C6-167





# COMMENTS AND RESPONSES

*Note: Online forum comments and responses are bound separately. Only the table of contents is provided in Volume 1. Volume 2 has the complete Appendix C.*

## C.7 On-Line Comment Forum

### Introduction to Appendix C.7

#### Sources of Comments

The comment period for the project closed on September 8, 2017. Comments in this appendix came from a project-specific on-line comment forum.

#### Numbering of Comments

Comments received via the online public forum were each assigned a unique comment number. Most people chose to comment anonymously on the on-line comment forum, so these comments were not organized by commenter, they were just numbered as they were provided from the on-line forum. Also included for each comment are the number of upvotes the comment received from other on-line forum users. There was no restriction on the number of times someone could log in and provide an up vote to a comment.

#### Organization of Appendix C.7

Because the on-line comment forum was organized by location along the corridor and most commenters chose to remain anonymous, the responses to the on-line forum comments are organized by location. Please note the Common Comments listed in Appendix C2 are referenced in this appendix. Readers accessing this appendix via pdf can use the bookmarks provided to jump to each area listed below.

- |                                    |   |  |
|------------------------------------|---|--|
| 1. Jones Franklin Road interchange | 6. Hillsborough Street and Wade Avenue interchange area | 10. JC Raulston Arboretum                      |
| 2. Athens Drive grade separation   | 7. Both Meredith College and University Club            | 11. General comments regarding overall project |
| 3. Melbourne Road interchange      | 8. Meredith College                                     |  |
| 4. Western Boulevard interchange   | 9. University Club                                      |  |
| 5. Ligon Street grade separation   |   |  |

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