

# Type I or II Categorical Exclusion Action Classification Form

STIP Project No.	<b>HL-0032</b>
WBS Element	49617.1.1
Federal Project No.	0040-117

## A. Project Description:

North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP) Project HL-0032 proposes to improve Lake Boone Trail from the I-440 westbound interchange ramps to Ridge Road in Raleigh, North Carolina (Wake County). The project is approximately 0.5 miles in length and included in the NCDOT 2020-2029 Current STIP (July 2022) with construction programmed for Fiscal Year 2023. The STIP project description includes upgrading Lake Boone Trail within the project limits to a Complete Street. The project will be reviewed and coordinated through the NCDOT Division 5 Office in accordance with the Capital Area Metropolitan Planning Organization (CAMPO) Locally Administered Projects Program (LAPP).

As currently proposed, Project HL-0032 would implement a road diet by reducing the existing four-lane facility to two travel lanes with a shared center turn lane. Bicycle accommodations would be provided in the form of bicycle lanes between the I-440 eastbound interchange ramps and Ridge Road intersection. Between the I-440 eastbound and westbound interchange ramps, bicycle accommodations would be provided in the form of shared lane markings. Pavement maintenance and restriping would be utilized to create the new lane configuration.

One existing bus shelter (eastbound) and one bus stop (westbound) would be removed and relocated to a new location just east of the eastbound I-440 onramp from Lake Boone Trail. Americans with Disabilities Act (ADA) compliant curb ramps and a crosswalk with a pedestrian refuge island will be located to the east of the eastbound I-440 on-ramp. The proposed improvements are anticipated to occur primarily within the existing curb line and right of way limits.

## B. Description of Need and Purpose:

The proposed improvements are required to enhance connectivity and safety for multimodal users in the project area and to support local objectives for development of the long-term bicycle network. As a secondary benefit, the proposed road diet may serve as a traffic calming measure and reduce the occurrence of automobile crashes.

## C. Categorical Exclusion Action Classification:

**Type I(A) - Ground Disturbing Action**

## D. Proposed Improvements:

3. Construction of bicycle and pedestrian lanes, paths, and facilities.

8. Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur.

## E. Special Project Information:

### Endangered Species Act Protected Species

As documented in the *Natural Resources Technical Report (NRTR)* (July 2022), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consulting (IPaC) service lists the following federally protected species within the project study area, under the Endangered Species Act (ESA) (Table 1). For each species, a discussion of the presence or absence of habitat is included below along with the Biological Conclusion rendered based on survey results in the study area.

**Table 1. ESA Federally Protected Species Within the Study Area<sup>1</sup>**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Picoides borealis</i>	Red-Cockaded Woodpecker	E	No	No Effect
<i>Necturus lewisi</i>	Neuse River Waterdog	T	No	No Effect
<i>Noturus furiosus</i>	Carolina Madtom	E	No	No Effect
<i>Fusconaia masoni</i>	Atlantic Pigtoe	T	No	No Effect
<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel	E	No	No Effect
<i>Rhus michauxii</i>	Michaux's Sumac	E	No	No Effect

<sup>1</sup> IPaC data checked on May 23, 2022; E – Endangered; T - Threatened

#### **Red-Cockaded Woodpecker**

Biological Conclusion: No Effect

Foraging habitat for the Red-Cockaded Woodpecker (RCW), in the form of mixed pine/hardwood stands greater than 30 years old, is not present in the study area. Nesting habitat, in the form of pine dominated mixed pine/hardwood stands 60 years in age or older is not present within the study area. Due to the lack of foraging and nesting habitat no surveys for the RCW are required. A review of NHP records on May 31, 2022, indicates no known occurrences within 1.0 mile of the study area.

#### **Neuse River Waterdog**

Biological Conclusion: No Effect

There are no streams or surface waters within the project study area, therefore there is no habitat for Neuse River Waterdog. House Creek crosses through the study area in a box culvert, but there will be no impacts to aquatic species for the project. A review of NHP records on May 31, 2022, indicates no known occurrences within 1.0 mile of the study area.

#### **Carolina Madtom**

Biological Conclusion: No Effect

There are no streams or surface waters other than House Creek, which is routed entirely through a box culvert within the project study area, therefore there is no habitat for Carolina Madtom. A review of NHP records on May 31, 2022, indicates no known occurrences within 1.0 mile of the study area.

#### **Atlantic Pigtoe**

Biological Conclusion: No Effect

There are no streams or surface waters other than House Creek, which is routed entirely through a box culvert within the project study area, therefore there is no habitat for Atlantic Pigtoe. A review of NHP records on May 31, 2022, indicates no known occurrences within 1 mile of the study area.

#### **Dwarf Wedgemussel**

Biological Conclusion: No Effect

There are no streams or surface waters other than House Creek, which is routed entirely through a box culvert within the project study area, therefore there is no habitat for Dwarf Wedgemussel. A review of NHP records on May 31, 2022, indicates no known occurrences within 1.0 mile of the study area.

#### **Michaux's Sumac**

Biological Conclusion: No Effect

Most of the project study area is maintained/disturbed, with a few small pockets of mixed hardwood or mixed pine/hardwood forest. There is no habitat for Michaux's Sumac within the project study area. A survey conducted on May 20, 2022, found no occurrences. A review of NHP records on May 31, 2022, indicates no known occurrences within 1.0 mile of the study area.

### **Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act is enforced by the USFWS. Golden eagles do not nest in North Carolina. Habitat for the Bald Eagle primarily consists of mature forests in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.0-mile radius of the project limits, was performed on May 19, 2022, using current orthoimagery color aerials. No water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the project study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NHP database on May 19, 2022, revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences, and minimal impact anticipated for this project, it has been determined that this project will not affect this species.

The USFWS has revised the previous programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the Northern Long-eared Bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The conservation measures do not apply to any parts of NCDOT Division 5. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where HL-0032 is located.

### Jurisdictional Features

The project study area is part of the Neuse River basin [U.S. Geological Survey (USGS) Hydrologic Unit [03020201]]. Field work conducted on May 20, 2022, identified no streams or wetlands in the project study area. While House Creek is conveyed beneath Lake Boone Trail within the project limits, it is entirely enclosed within an existing 9'x8' double barrel culvert in the section overlapping with the project study area and will not be impacted by the project (see Figure 3).

The study area does not contain any streams that have been designated as an Outstanding Resource Water (ORW). There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within, or within 1.0 mile downstream of the study area. There are no streams listed on the 2020 Final 303(d) list of impaired waters within the project study area.

### Riparian Buffers

The project study area is located within the Neuse River Basin where riparian buffer rules apply. House Creek, located just outside of the study area, is subject to Neuse River Basin Buffer Rules due to the stream being a named stream found on USGS topography mapping as well as the Natural Resources Conservation Service (NRCS) Wake County Soil Survey. Daylighted portions of the stream occur entirely outside of the study area, so no portions of this stream or buffer area will be impacted by the project.

### Floodplains and Floodways

Lake Boone Trail includes a crossing of House Creek within the project limits, which also involves areas of 100-year floodplain (FEMA Detailed Study - Zone AE) and regulatory floodway. As currently proposed, there will be no changes to the roadway profile, curb and gutter, or existing 9-foot by 8-foot double barrel

Reinforced Concrete Box Culvert (RCBC) in the vicinity of the floodplain and floodway area. Correspondence with the NCDOT Hydraulics Unit indicated that since the project will not involve any work within the mapped regulatory floodway, coordination with the North Carolina Floodplain Mapping Program is not necessary to achieve State Floodplain Compliance.

### Cultural Resources

Correspondence with the Catawba Indian Nation dated March 22, 2022, indicated they have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.

In communication dated March 23, 2022, the North Carolina State Historic Preservation Office (NCSHPO) noted they had conducted a review of the project and are aware of no historic resources which would be affected by the project.

### Hazardous Materials

Correspondence with the North Carolina Department of Environmental Quality (NCDEQ) Division of Waste Management dated March 21, 2022, indicated the presence of three known contamination sites within one mile of the project site. Two of these (one toxic release site and one underground storage tank (UST) incident) are located with frontage along the HL-0032 project corridor (see Figure 3). The NCDOT GeoEnvironmental Section does not recommend additional investigation of hazardous material sites and recommends inclusion of standard language in the project contract for management of petroleum contaminated soil.

### Community Resources

The House Creek Greenway is a 10-foot asphalt path carried beneath Lake Boone Trail via a pedestrian tunnel within the project limits (see Figure 3). On either side of Lake Boone Trail, the greenway trail is located within two North Carolina Natural Heritage Program (NCNHP) Managed Areas (ID: 4219 and 4220) that are both owned by the City of Raleigh and named City of Raleigh Greenway – House Creek Greenway in NCNHP data.

The HL-0032 project would also construct new angled curb ramps along the north side of Lake Boone Trail in the vicinity of the pedestrian tunnel carrying the House Creek Greenway and adjacent to the NCNHP Managed Area. These ramps would be constructed along existing sidewalk and provide for future multimodal connectivity to the House Creek Greenway from westbound Lake Boone Trail. It is anticipated that improvements to this presently unpaved greenway connection will be evaluated as part of a future project.

The proposed transit stop and angled bicycle curb ramp along the north side of Lake Boone Trail may extend beyond the existing curb line in the vicinity of the NCNHP Managed Area. As documented in the *Direct and Indirect Screening Tool* (June 2022), negative impacts to the use or accessibility of the House Creek Greenway and associated NCNHP Managed Area are not anticipated as a result of the project. Coordination with FHWA dated August 29, 2022 indicated the greenway trail would not be subject to protection under Section 4(f) of the U.S. Department of Transportation Act because of its primary use as a transportation facility that was constructed in part using Surface Transportation Program (STP) funding.

### Public Involvement

The City of Raleigh held a virtual public meeting for the subject project on March 16, 2022. During the meeting, a presentation was given to describe the project background and purpose and need, provide an overview of the proposed design maps, discuss schedule milestones, and provide comment responses. A project website was also posted on the City of Raleigh webpage to house project materials and provide opportunity for additional comments during the virtual open house period of March 11-25, 2022. Comments received were primarily concerning requests for traffic signals at the I-440 eastbound ramps and Horton Street, questions about bicycle accommodations, greenway connection, and access management at the intersection of Thomas Road and Lake Boone Trail. Comment responses were developed by the City of Raleigh and posted on the project webpage.

### Indirect and Cumulative Effects

The project would not notably alter travel patterns, reduce travel time, affect vehicular access to properties in the area, or open areas for development or redevelopment. Due to its minimal transportation impact-causing activities, this project would neither influence nearby land uses nor stimulate growth anticipated as documented in the *Direct and Indirect Screening Tool* (June 2022). Therefore, a detailed indirect and cumulative effects study would not be necessary.

### Environmental Justice and Limited English Proficiency Populations

A review of Census data indicates there are no populations meeting low-income, minority, or Limited English Proficiency (LEP) thresholds within the Demographic Study Area of the project. As documented in the *Direct and Indirect Screening Tool* (June 2022), the project is not anticipated to cause disproportionately high and adverse effects on low-income or minority populations.

F. Project Impact Criteria Checklists:

<b>F2. Ground Disturbing Actions – Type I (Appendix A) &amp; Type II (Appendix B)</b>				
<p>Proposed improvement(s) that fit Type I Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix A) including 2, 3, 6, 7, 9, 12, 18, 21, 22 (ground disturbing), 23, 24, 25, 26, 27, 28, &amp;/or 30; &amp;/or Type II Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix B) answer the project impact threshold questions (below) and questions 8 – 31.</p> <ul style="list-style-type: none"> <li>• <i>If any question 1-7 is checked “Yes” then NCDOT certification for FHWA approval is required.</i></li> <li>• <i>If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.</i></li> </ul>				
<u>PROJECT IMPACT THRESHOLDS</u> (FHWA signature required if any of the questions 1-7 are marked “Yes”.)			Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.				
<u>Other Considerations</u>			Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Other Considerations for Type I and II Ground Disturbing Actions (continued)</u>		Yes	No
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project considered a Type I under the NCDOT Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

8. *Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?*

The USFWS has revised the previous programmatic biological opinion (PBO) in conjunction with the FHWA, the USACE, and NCDOT for the Northern Long-eared Bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The conservation measures do not apply to any parts of NCDOT Division 5. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where HL-0032 is located.

15. *Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?*

Correspondence with the NC Department of Environmental Quality identified a total of three known geoenvironmental contamination sites within one mile of the project site. Two of these (one toxic release site and one underground storage tank (UST) incident) are located with frontage along the HL-0032 project corridor (see Figure 3).

The NCDOT GeoEnvironmental Section advises the Contractor that petroleum contaminated soil may be encountered during earthwork activities on the project. The Contractor shall only excavate those soils that the Engineer designates necessary to complete a particular task. The Engineer shall determine if soil is contaminated based on areas shown on the plans, petroleum odors, and unusual soil staining. Contaminated soil not required to be excavated is to remain in place and undisturbed. Undisturbed soil shall remain in place, whether contaminated or not. The Contractor shall transport all contaminated soil excavated from the project to a facility licensed to accept contaminated soil.



H. Project Commitments (attach as Green Sheet to CE Form):

## **NCDOT PROJECT COMMITMENTS**

STIP Project No. **HL-0032**  
Lake Boone Trail from I-440 to Ridge Road in Raleigh  
Upgrade to Complete Street  
Wake County  
Federal Aid Project No. 0040-117  
WBS Element 49617.1.1

### **Cultural Resources**

The Catawba Indian Nation are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.

### **GeoEnvironmental Sites**

The Contractor should be advised that petroleum contaminated soil may be encountered during earthwork activities on the project. The Contractor shall only excavate those soils that the Engineer designates necessary to complete a particular task. The Engineer shall determine if soil is contaminated based on areas shown on the plans, petroleum odors, and unusual soil staining. Contaminated soil not required to be excavated is to remain in place and undisturbed. Undisturbed soil shall remain in place, whether contaminated or not. The Contractor shall transport all contaminated soil excavated from the project to a facility licensed to accept contaminated soil.

I. Categorical Exclusion Approval:

STIP Project No.	<b>HL-0032</b>
WBS Element	49617.1.1
Federal Project No.	0040-117

**Prepared By:** DocuSigned by:  
10/10/2022 *Brian Yamamoto*  
Date CDFCAL5B0F734FA...  
Brian Yamamoto, PE, Senior Project Development Engineer  
NV5 Engineers and Consultants

**Prepared For:** DocuSigned by:  
10/10/2022 *Brian Roth-Roffy*  
Date 777604274ADA420...  
Brian Roth-Roffy, PE, Senior Project Manager  
City of Raleigh Engineering Services

**Reviewed By:** DocuSigned by:  
10/10/2022 *Chris Murray*  
Date ABC0E6FA09864B2...  
Chris Murray, SPWS, Project Engineer for Planning and Environmental Studies  
North Carolina Department of Transportation

- Approved**
- If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.
- Certified**
- If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
  - If classified as Type III Categorical Exclusion.

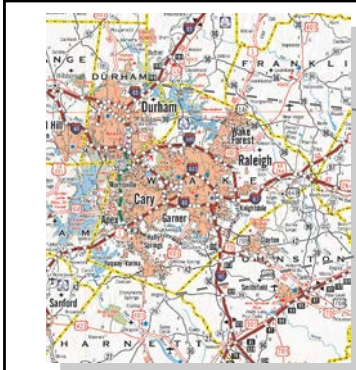
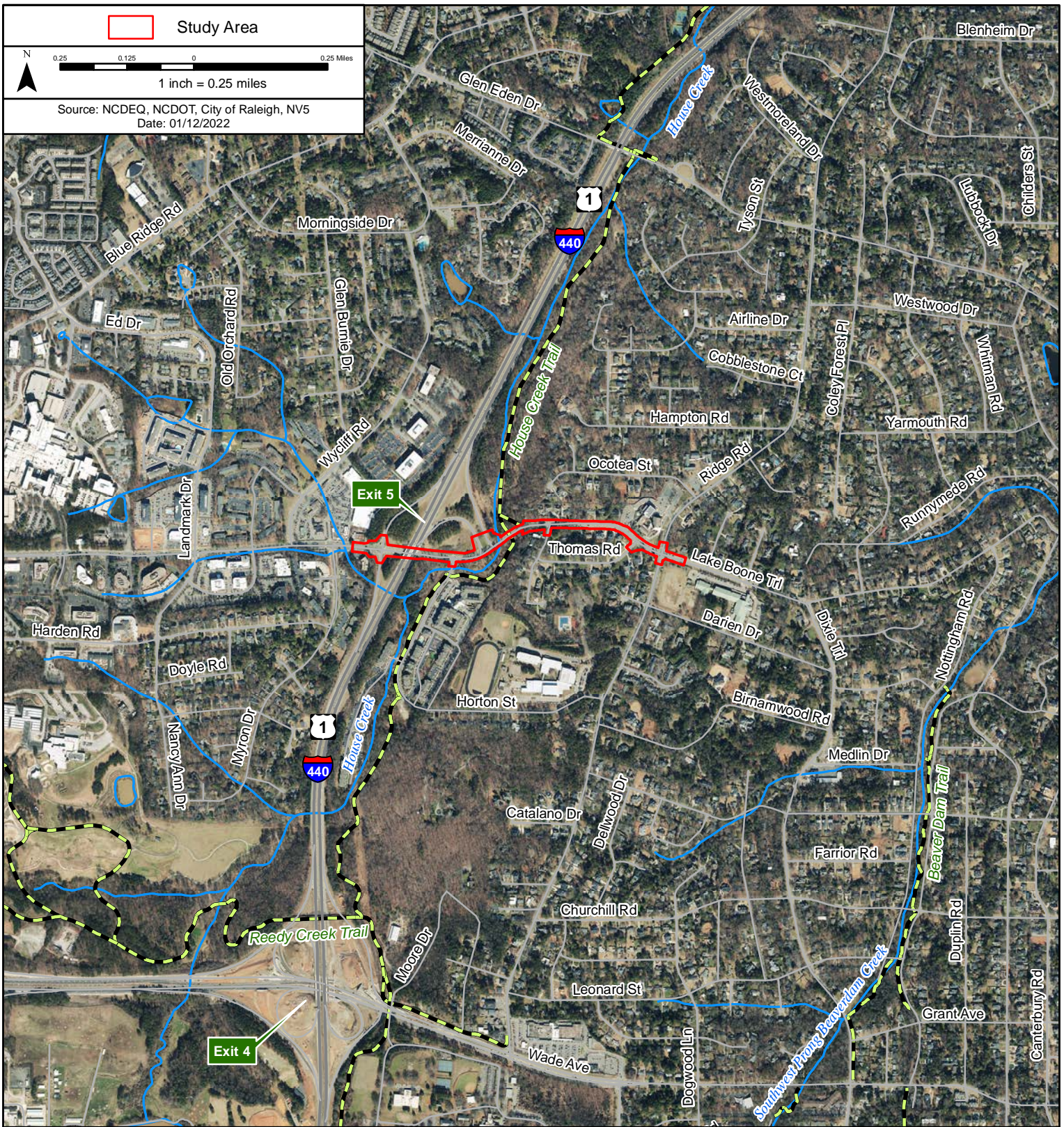
10/10/2022 DocuSigned by:  
Date *Ben Upshaw*  
CD6EB110D6E54E5...  
Ben Upshaw, PE, Division Project Development Engineer  
for Brandon H. Jones, PE, Division Engineer, Highway Division 5  
North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

\_\_\_\_\_  
Date for John F. Sullivan, III, PE, Division Administrator  
Federal Highway Administration

*Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).*





**Wake County**

**Lake Boone Trail from I-440 to Ridge Road in Raleigh Upgrade Roadway to Complete Street**

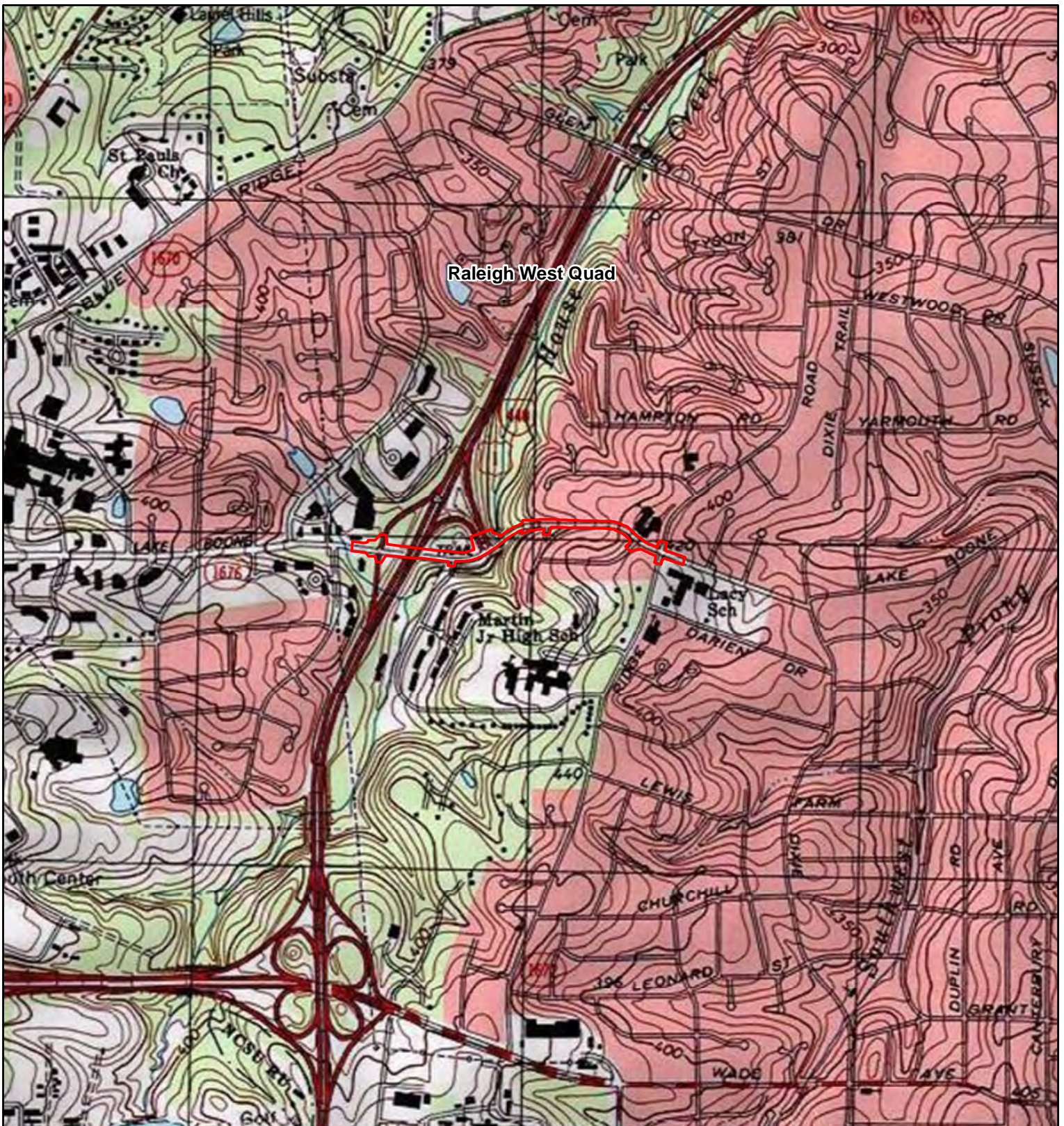
NCDOT STIP Project HL-0032  
City of Raleigh

  
Raleigh  
City of Raleigh  
Engineering Services

  
North Carolina  
Department of Transportation  
Highway Division 5



**Figure 1 - Project Vicinity**





Raleigh West Quad

Lake Boone Trail from  
 I-440 to Ridge Road in Raleigh  
 Upgrade Roadway to Complete Street  
 NCDOT STIP Project HL-0032  
 City of Raleigh

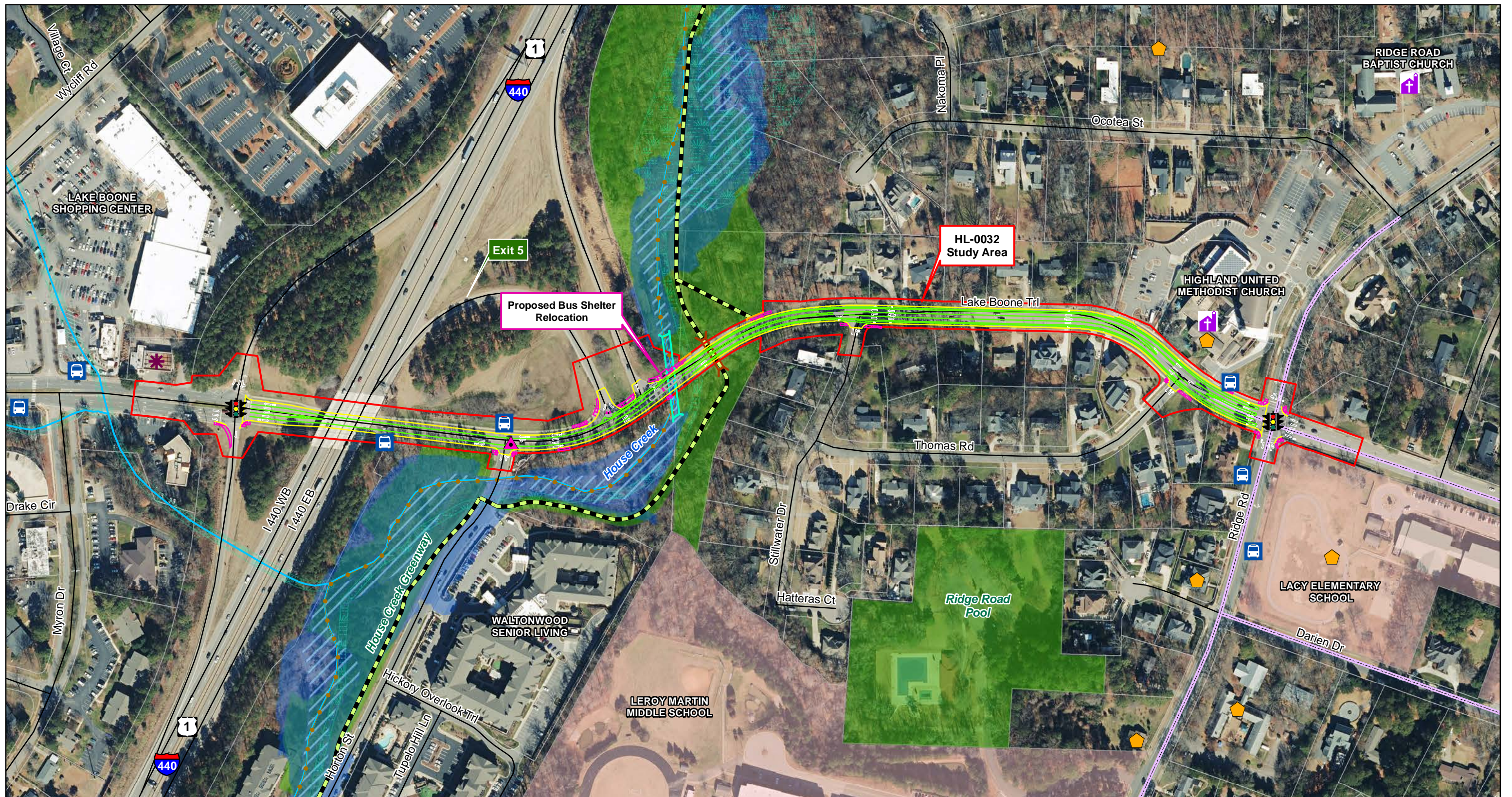
 Study Area  
  
 1 inch = 0.25 miles  
 Source: ESRI, NV5  
 Date: 01/12/2022

  
 Raleigh  
 City of Raleigh  
 Engineering Services

  
 North Carolina  
 Department of Transportation  
 Highway Division 5

Figure 2 - Topography





- |                          |                     |                                 |                              |
|--------------------------|---------------------|---------------------------------|------------------------------|
| HL-0032 Study Area       | NCNHP Managed Area  | USGS Blueline Stream            | Traffic Signal               |
| Proposed Lane Line       | Public School       | Road                            | GoRaleigh Bus Stop (Route 4) |
| Proposed Edge of Travel  | Parcel              | Greenway                        | NCSHPO Point (Surveyed Only) |
| Proposed Sidewalk        | NW1 Wetland         | School Zone                     | Place of Worship             |
| Proposed Concrete Island | 100-Year Floodplain | Hydraulic Culvert               | Toxic Release Site           |
| Proposed Right of Way    | Floodway            | Pedestrian Tunnel               | UST Incident                 |
|                          |                     | NCDEQ Nutrient Sensitive Waters |                              |

City of Raleigh  
 Engineering Services  
 North Carolina  
 Department of Transportation  
 Highway Division 5

N  
 250 125 0 250 Feet  
 1 inch = 250 feet

Source: City of Raleigh, NC OneMap, NCDEQ, NCDOT, USGS, Google, NV5  
 Figure Date: 08/29/2022

**Lake Boone Trail from  
 I-440 to Ridge Road in Raleigh  
 Upgrade Roadway to Complete Street**

**NCDOT STIP Project HL-0032  
 Wake County**

**Figure 3 - Environmental Features**