

## Type III Categorical Exclusion Action Classification Form

STIP Project No.	<b>I-5973</b>
WBS Element	<b>44990.1.1</b>
Federal Project No.	<b>NHP-0485(052)</b>

### A. Project Description:

NCDOT STIP Project No. I-5973 proposes to improve the interchange of I-485 and N.C. 16 (Brookshire Boulevard) in Charlotte, Mecklenburg County (See **Figure 1**). The project proposes additional northbound and southbound lanes on Brookshire Boulevard and will improve the Outer Loop on and off ramps, the Inner Loop off ramp, and the intersections of Brookshire Boulevard with the Inner and Outer Loop ramps (See **Figure 2**). All work is anticipated to be completed within the existing right-of-way.

STIP Project No. I-5973 is designed to tie in with the future continuous flow intersection (CFI) planned at the intersection of Brookshire Boulevard and Mount Holly-Huntersville Road (See **Figure 2**). These improvements, funded by the NCDOT STIP Project No. U-6084, are scheduled to be constructed by December 2019.

As stated in the NCDOT 2018-2027 State Transportation Improvement Program (STIP), amended April 2019, the project is currently estimated to cost \$10.9 million to construct. The STIP also allocated \$2.8 million and \$500,000 for right-of-way and utility relocation costs, respectively. The project has incurred approximately \$2.2 million in prior costs for a total project cost of \$16.4 million. These cost estimates are preliminary and subject to change. The project is currently scheduled to begin right-of-way acquisition in Fiscal Year (FY) 2021 and be let for construction in FY 2023.

### B. Description of Need and Purpose:

The primary purpose of the project is to reduce congestion on Brookshire Boulevard through the interchange through 2040. Without improvements, the I-485 Outer Loop/Brookshire Boulevard intersection is expected to operate at an unacceptable level of service in the design year 2040. Especially long delays are anticipated southbound on Brookshire Boulevard in the AM peak hour and northbound on Brookshire Boulevard in the PM peak hour at the I-485 Outer Loop off-ramp.

### C. Categorical Exclusion Action Classification: Type III

#### D. Proposed Improvements:

Capacity analyses were performed for the current and future build year (2040). Three build alternatives were considered along N.C. 16 between the I-485 ramps:

- Alternative 1 – Five-lane median divided cross-section along N.C. 16 (three northbound through lanes and two southbound through lanes)
- Alternative 2 – Six-lane median divided cross-section along N.C. 16 (three northbound through lanes and three southbound through lanes)
- Alternative 3 – Seven-lane median divided cross-section along N.C. 16 (four northbound through lanes and three southbound through lanes)

Based on the analysis within the *Traffic Capacity Analysis Technical Memorandum*, updated December 2018, Alternative 3 is the recommended roadway laneage upon build-out of I-5973.

The recommended alternative proposes a seven-lane median divided cross-section along Brookshire Boulevard including, four northbound through lanes and three southbound through lanes. The third northbound through lane begins south of the I-485 Inner Loop intersection and the fourth northbound through lane begins just north of the I-485 Inner Loop intersection and drops as a northbound left-turn lane at the southern CFI crossover intersection. With these improvements, the overall intersection and each approach is expected to operate at LOS D or better during both peak hours.

#### E. Special Project Information:

*Threatened and Endangered Species:* The United States Fish and Wildlife Service (USFWS) lists six species as threatened or endangered for Mecklenburg County (Updated June 2018): Michaux's sumac, Schweinitz's sunflower, smooth coneflower, Carolina heelsplitter, rusty-patched bumble bee (RPBB), and northern long-eared bat (NLEB). Suitable habitat for Michaux's sumac, Schweinitz's sunflower, and the smooth coneflower were found within the study area. However, due to a lack of recorded occurrences and a lack of observed individuals in the project study area, it has been determined that the proposed project will have "No Effect" on these species. Since no suitable habitat for the Carolina heelsplitter is present, a "No Effect" determination was made. A biological conclusion is not required for the RPBB because the USFWS does not and will not require surveys for RPBB in North Carolina, as the USFWS assumes the state is unoccupied by RPBB.

Suitable roosting habitat for the NLEB is present within the study area; however, there are no known hibernacula or roosting sites within Mecklenburg County. In addition, Mecklenburg County is not identified by the USFWS Asheville Field Office as a county where incidental take may be a special consideration for NLEB. A review of the North Carolina Natural Heritage Program (NCNHP) records, updated May 2018, indicates no known roosting sites or hibernacula within 1.0 mile of the

study area. Based upon the presence of potentially suitable habitat but the lack of known occurrences, hibernacula, or roosting sites, the biological conclusion of "May Affect, Not Likely to Adversely Affect" has been rendered for NLEB for this project.

In accordance with the Bald and Golden Eagle Protection Act (BGPA), a desktop-GIS assessment and field survey of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, was performed in May 2018. 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 NCNHP database in May 2018, 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, the biological conclusion of "No Effect" has been rendered for the bald eagle for this project.

*Jurisdictional Features:* Two streams (SA and SB) and one wetland (WA) were identified in the *Natural Resources Technical Memorandum*, updated April 2019 (See **Figure 2**). The streams in the study area are unnamed tributaries to Long Creek and have been designated as warm water streams for the purposes of stream mitigation. One wetland was identified within the study area.

There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II) in or within 1.0 mile downstream of the study area. In addition, the North Carolina 2016 Final 303(d) list of impaired waters identifies no waters within the study area or within 1.0 mile downstream of the study area as an impaired water due to sedimentation or turbidity.

*Public Involvement:* A public meeting was held on November 8, 2018 at the Mountain Island Church of Christ in Charlotte, N.C. Approximately 31 people attended the public meeting. Written comments were received from 8 members of the community. Overall feedback was positive, with several comments suggesting signal timing modifications to improve operations at the intersections. Design suggestions included the addition of a dedicated right turn lane on the I-485 Inner Loop off ramp. In response, the design has since been altered to extend the northbound right-turn lane on the I-485 Inner Loop off ramp to provide 450 feet of storage. An additional northbound through lane will also be constructed with 450 feet of storage.

Since the public meeting, additional storage length was added to the I-485 Inner Loop off-ramp by extending the existing right-turn lane approximately 600 feet, and to the Outer Loop off-ramp by adding approximately 400 feet to the inside lane. On N.C. 16, an additional northbound through lane was added beginning north of the I-485 Inner Loop ramps and then tying in to the continuous flow intersection being constructed by project U-6084.

F. Project Impact Criteria Checklists:

<u>Type III Actions</u>		Yes	No
1	Does the project involve potential effects on species listed with the US Fish and Wildlife Service (USFWS) or National Marine Fisheries (NMFS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project include a determination under Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Is a project level air quality Mobile Source Air Toxics (MSAT) analysis required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input 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"/>
14	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a no effect, including archaeological remains? Are there project commitments identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve hazardous materials and/or landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely effecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input 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"/>

<u>Type III Actions (continued)</u>		Yes	No
21	Does the project impact federal lands (e.g. USFS, USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input 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 or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Is the project considered a Type I under the NCDOT's Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Are there other issues that arose during the project development process that effected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F:

1. There is suitable roosting habitat for the NLEB within the study area; however, there are no known hibernacula or roosting sites within Mecklenburg County. Based upon the presence of potentially suitable habitat but the lack of known occurrences, hibernacula, or roosting sites, the biological conclusion of "May Affect, Not Likely to Adversely Affect" has been rendered for NLEB for this project.

8. The project is in Mecklenburg County, which is within the Charlotte maintenance area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated moderate nonattainment under the 1997 ozone NAAQS on June 15, 2004 and due to improved air quality in the region was re-designated maintenance on January 2, 2014. The Charlotte area was designated for the 2008 ozone NAAQS resulting in the 1997 ozone NAAQS being revoked on April 6, 2015. On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* ("South Coast II," 882 F.3d 1138) held that transportation applies for the revoked 1997 ozone NAAQS areas. Transportation conformity for plans and TIPs for the 1997 Ozone NAAQS can be demonstrated without a regional emissions analysis pursuant to 40 CFR 93.109(c).

The project is in Mecklenburg County, which is within the Charlotte maintenance area for the 2008 ozone NAAQS as defined by the EPA. The Charlotte area was designated marginal nonattainment under the 2008 ozone NAAQS on July 20, 2012 and due to improved air quality in the region was re-designated maintenance on August 27, 2015. Section 176(c) of the CAAA requires that transportation plans, programs, and projects conform to the intent of the state air quality implementation plan (SIP). The current SIP does not contain any transportation control measures for Mecklenburg County. The Charlotte Region Transportation Planning Organization 2045 Metropolitan Transportation Plan (MTP) and the 2018-2022 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the MTP on December 3, 2018 and the TIP on December 3, 2018. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. There are no significant changes in the project's design concept or scope, as used in the conformity analyses.

H. Project Commitments:

**Charlotte, Mecklenburg County  
Interchange Improvements at I-485 and Brookshire Boulevard (N.C. 16)  
Federal Project No. NHP-0485(052)  
WBS No. 44990.1.1  
TIP No. I-5973**

No commitments.

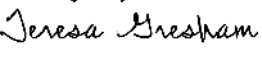
I. Categorical Exclusion Approval

STIP Project No.	<u>I-5973</u>
WBS Element	<u>44990.1.1</u>
Federal Project No.	<u>NHP-0485(052)</u>

**Prepared By:**

5/29/2019

\_\_\_\_\_  
Date

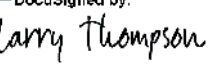
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 Teresa Gresham, PE  
 Kimley-Horn and Associates, Inc.

**Prepared For:** NCDOT Division 10

**Reviewed By:**

5/29/2019

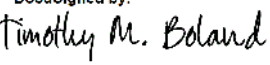
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 Larry Thompson, PWS, LSS, Division Environmental Officer  
 Highway Division 10  
 North Carolina Department of Transportation

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

5/30/2019

\_\_\_\_\_  
Date

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 Tim Boland, PE, Division Project Development Engineer  
 Highway Division 10  
 North Carolina Department of Transportation

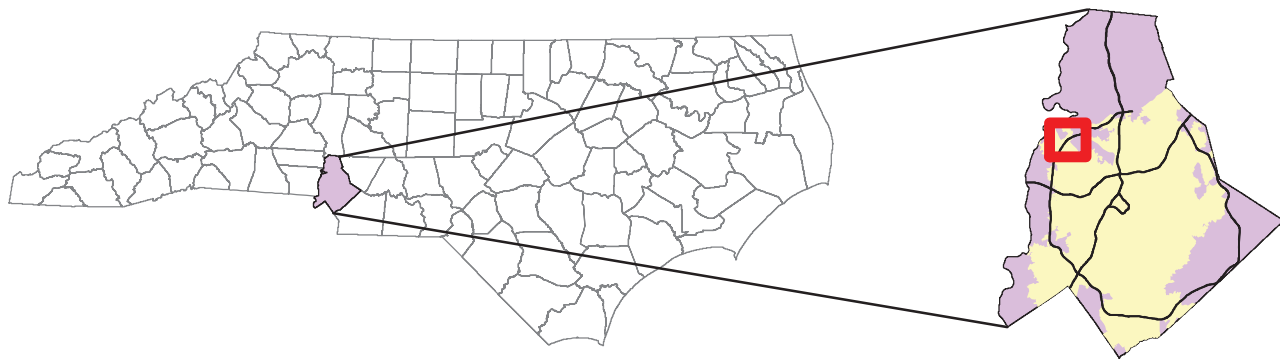
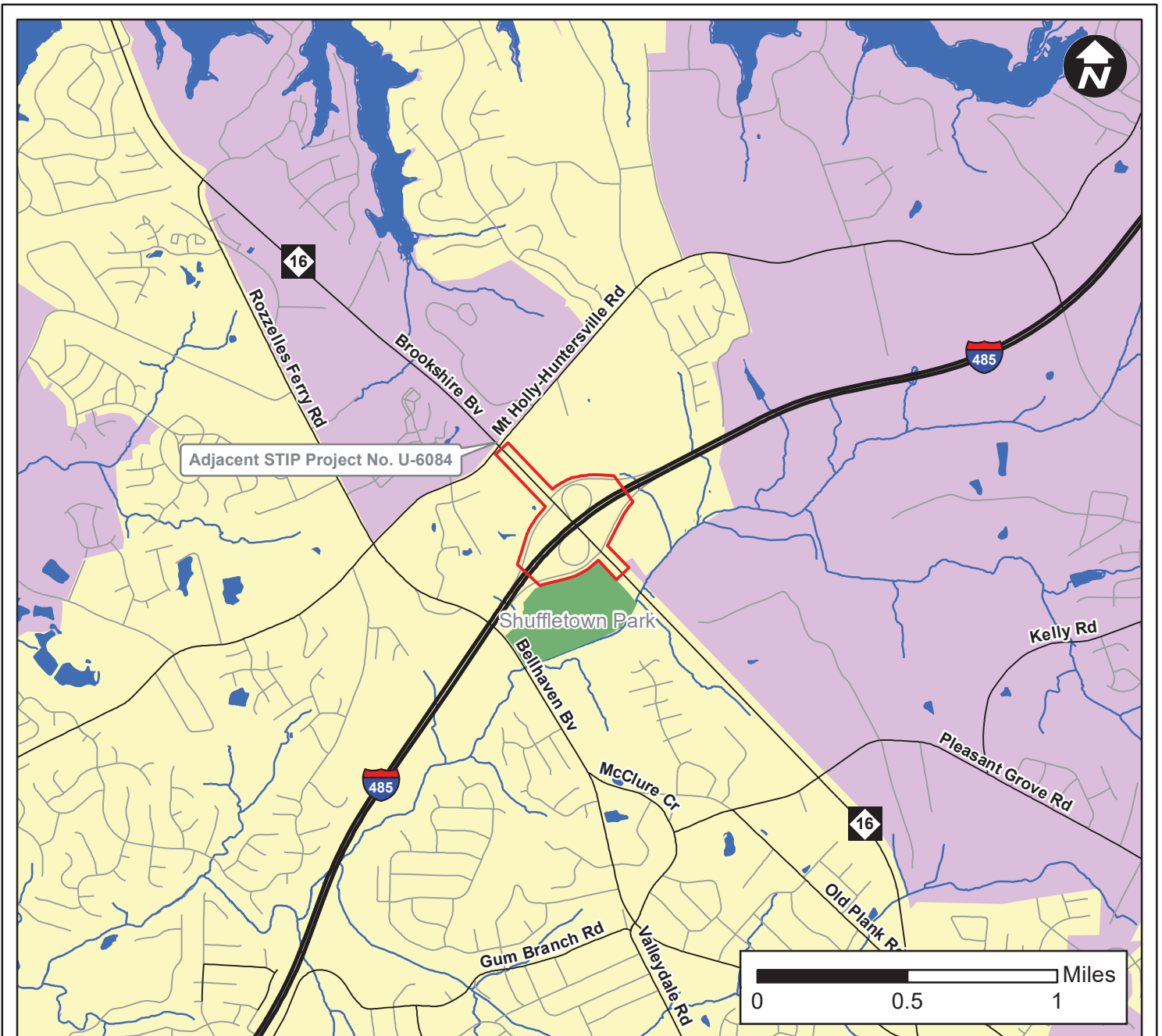
FHWA Approval:


6/4/2019

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Date

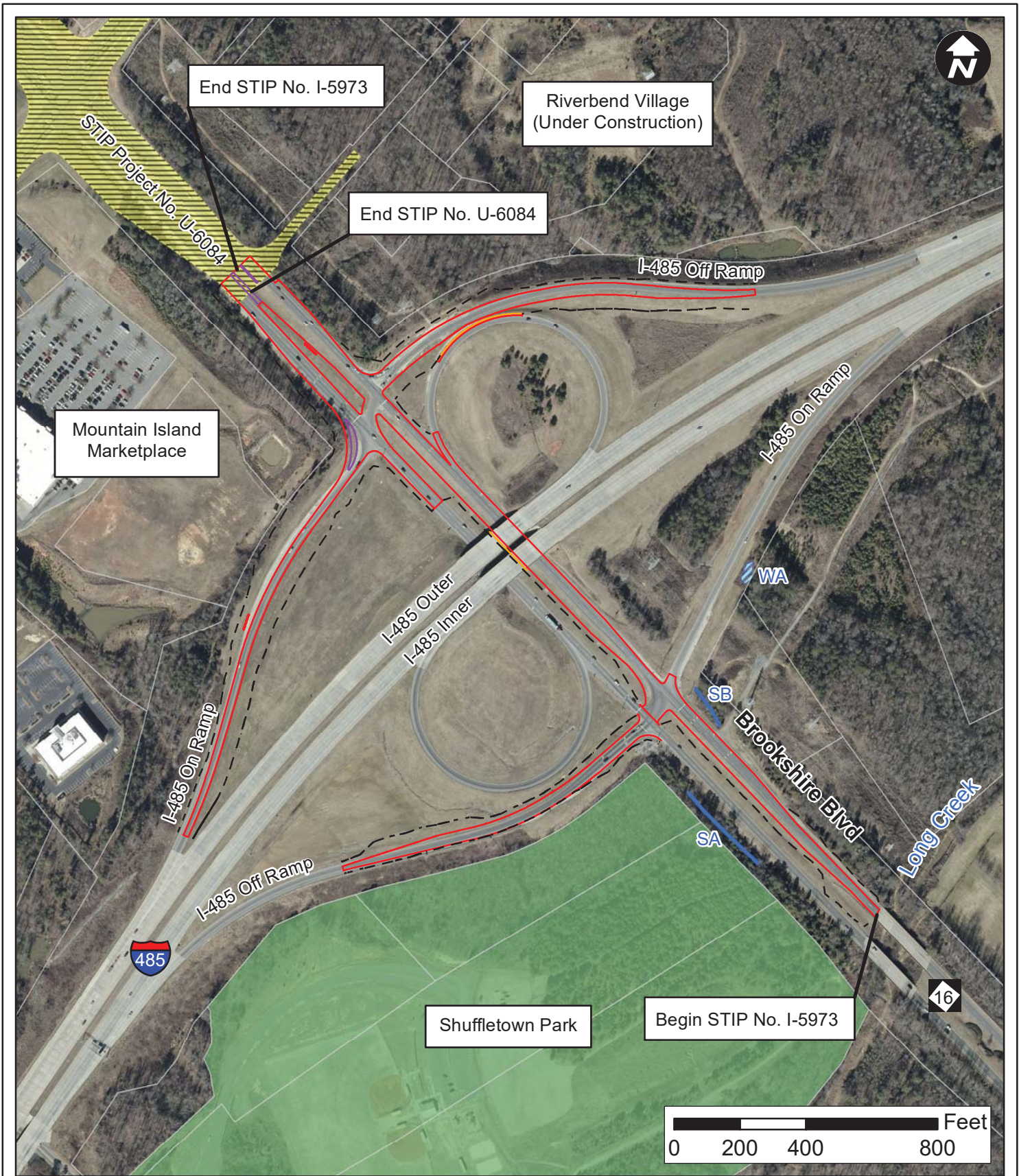
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 John F. Sullivan, III, PE, Division Administrator  
 Federal Highway Administration





-  Study Area
-  City of Charlotte
-  Mecklenburg County
-  Parks
-  Lakes and Ponds (NWI)
-  Streams (NCDEQ)

**Figure 1**  
**Vicinity Map**  
NCDOT STIP No. I-5973  
I-485/N.C. 16 (Brookshire Blvd)  
Interchange Improvements  
Mecklenburg County



- Proposed Concrete Island
- Proposed Concrete Barrier
- Proposed Edge of Travel
- Slope Stakes
- Delineated Streams
- Delineated Wetlands
- Parcels
- Park

**Figure 2**  
**Detailed Design Map**  
 NCDOT STIP No. I-5973  
 I-485/N.C. 16 (Brookshire Blvd)  
 Interchange Improvements  
 Mecklenburg County

18-04-0013



## HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No:</b>	I-5973	<b>County:</b>	Mecklenburg
<b>WBS No.:</b>	44990.1.1	<b>Document Type:</b>	CE
<b>Fed. Aid No:</b>	NHP-	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	USACE
<b><u>Project Description:</u></b> Improve interchange at I-485 and NC 16 (Brookshire Rd)			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<p><b><u>Description of review activities, results, and conclusions:</u></b> Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on May 10, 2018. Based on this review there are no NR, DE, LL, SL, or SS in the Area of Potential Effects (APE). There are no structures over 50 years of age in the APE. No Survey is required at this time.</p>
<p><b><u>Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:</u></b> Using HPO GIS website and county tax data provides reliable information regarding the structures in the APE. These combined utilities are considered valid for the purposes of determining the likelihood of historic resources being present.</p>

### SUPPORT DOCUMENTATION

Map(s)    
 Previous Survey Info.    
 Photos    
 Correspondence    
 Design Plans

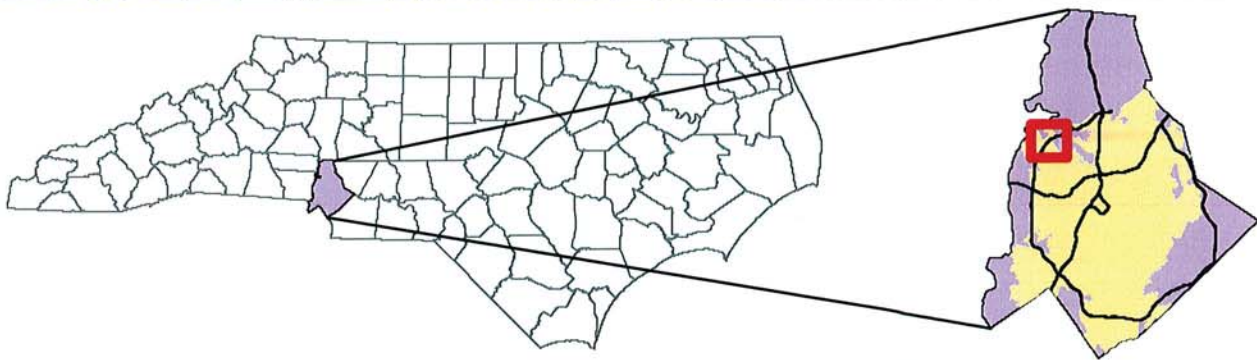
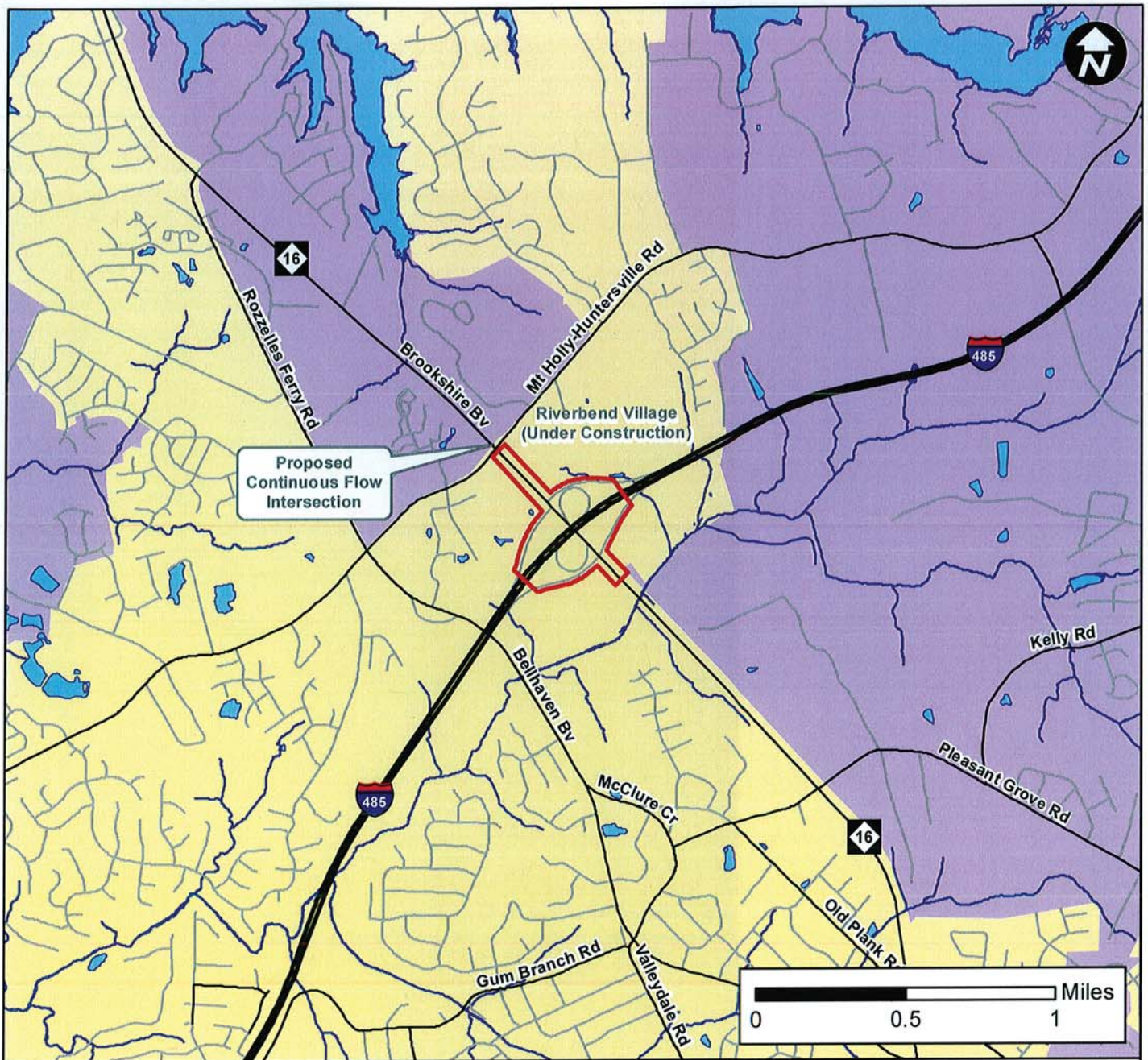
### FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

\_\_\_\_\_  
 NCDOT Architectural Historian

\_\_\_\_\_  
 Date





-  Study Area
-  City of Charlotte
-  Mecklenburg County
-  Lakes and Ponds
-  Streams

**Figure 1**  
**Vicinity Map**  
NCDOT Project No. I-5973  
I-485/NC 16 (Brookshire Boulevard)  
Interchange Improvements  
Mecklenburg County



There is one project within the A.P.E. that has been reviewed by the State Historic Preservation Office (HPO). ER 03-1086 is a tract along the east side of NC 16 and the south side of I-485.

#### References Cited

McNutt, Jr., Charles H.

1989 "A Cultural Resources Survey of the North Charlotte Outer Loop, Mecklenburg County, North Carolina" (NCDOT TIP R-2123). Report submitted to Greiner, Inc., Fort Meyers, Florida. Garrow & Associates, Inc., Atlanta, Georgia.

***Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:***

The landforms within the A.P.E. have a low to moderate potential for archaeological sites. Most of the A.P.E. is developed. The proposed improvements will be made within the existing right of way of the present interchange.

#### SUPPORT DOCUMENTATION

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
 Photocopy of County Survey Notes    Other:

#### FINDING BY NCDOT ARCHAEOLOGIST

**NO ARCHAEOLOGY SURVEY REQUIRED**

Caleb Smith

8/16/018

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NCDOT ARCHAEOLOGIST II

Date