# **PROJECT COMMITMENTS**

# SR 1002 (AVIATION PARKWAY), IMPROVE INTERCHANGE AND CONSTRUCT AUXILIARY LANE ALONG I-40 WESTBOUND FROM SR 1002 TO SR 3015 (AIRPORT BOULEVARD) Wake County, North Carolina WBS Element – 43608.1.1 Federal Aid Project No. – NHPP-040-7(154)284 TIP PROJECT NO. - I-5506

Current status, changes, or additions to the project commitments as shown in the environmental documents are printed in *italics*.

## **Project Development and Environmental Analysis:**

Coordination will continue with the Town of Cary, Wake County, *GoTriangle, and the* Raleigh Durham Airport Authority to determine location of sidewalks to be constructed in conjunction with the project.

The Town of Cary has confirmed the location of sidewalks to be constructed in conjunction with this project. This commitment has been completed.

## Division 5, Roadside Environmental, Town of Cary and Town of Morrisville:

Coordination will be needed with the Towns of Cary and Morrisville to coordinate enhanced landscaping as part of the project for the loops and/or ramps of this project.

## **Division 5 and Wake County Parks and Recreation**

Coordination between NCDOT and Wake County Parks and Recreation will be needed prior to any actions concerning the Lake Trail within existing NCDOT right of way.

## North Carolina Department of Transportation PROJECT ENVIRONMENTAL CONSULTATION FORM I. D. No. I-5506

# I. <u>GENERAL INFORMATION</u>

a.	Consultation Phase:	Construction	
b.	Project Description:	SR 1002 (Aviation Parkway), improve interchange and construct auxiliary lane along I-40 westbound from SR 1002 to SR 3015 (Airport Boulevard)	
c.	WBS Element Number: Federal Project:	43608.1.1 NHPP-040-7(154)28	4
d.	Document Type:	CE	<u>08/30/2016</u> Date
		RW Consultation	<u>02/23/2017</u> Date

# II. <u>CONCLUSIONS</u>

The above environmental document has been reevaluated as required by 23 CFR 771. It was determined that the current proposed action is essentially the same as the original proposed action. Proposed changes, if any, are noted below in Section III. It has been determined that anticipated social, economic, and environmental impacts were accurately described in the above referenced document(s) unless noted otherwise herein. Therefore, the original Administration Action remains valid.

## III. <u>CHANGES IN PROPOSED ACTION AND ENVIRONMENTAL</u> <u>CONSEQUENCES</u>

1. Based on updated traffic information, an additional left turn lane has been added at the Gateway Centre Boulevard entrance across from the Lake Crabtree entrance and at National Guard Drive. The new left turn lane has extended the temporary construction easements outside the original study area at Gateway Centre by about 100 feet (see attached plan sheet 4). At National Guard Drive, the additional left turn lane has extended permanent easements by about 245 to 270 feet outside the original study area (see attached plan sheet 6).

## North Carolina Department of Transportation PROJECT ENVIRONMENTAL CONSULTATION FORM I. D. No. I-5506

- 2. Surveys were conducted by NCDOT biologists that included these new study areas for Michaux's sumac and the red-cockaded (RCW) on May 15, 2017. No Michaux's sumac plants were located. RCW foraging habitat was found, however no nests were located during the survey. A review of the North Carolina Natural Heritage Program (NHP) records, updated April 2017, indicates no known Michaux's sumac or RCW occurrence within 1 mile of the study area (see attached email from Environmental Analysis Unit).
- 3. The new study areas were also reviewed by NCDOT Historic Architecture and Archeology (see attached reports). In addition, Historic Archeology reviewed an area south of the Gateway Business entrance across from the Lake Crabtree entrance that had been left out in their previous review (see southernmost area on Plan Sheet 4). No additional sites for these resources were located within any of these study areas.
- 4. No additional impacts to any resources have occurred due to the design changes mentioned above.

# IV. LIST OF ENVIRONMENTAL COMMITMENTS

See attached.

# V. <u>COORDINATION</u>

PDEA personnel have discussed current project proposals with others. Please note who was coordinated with and the date. This section is to be filled out by the project manager and does not require signatures.

Design Engineer:	Kanchana Noland	<u>9/13/2017</u> Date
FHWA Engineer:	Eddie Dancausse	9/13/2017 Date
NEU-PM:	Deanna Riffey (Construction Consultations only)	9/15/2017 Date

## North Carolina Department of Transportation PROJECT ENVIRONMENTAL CONSULTATION FORM I. D. No. I-5506

NCDOT CONCURRENCE VI.

ananus Project Planning Engineer

Manager, Project/Development and Environmental

10/18/17 Date 10/18/17

#### FHWA CONCURRENCE VII.

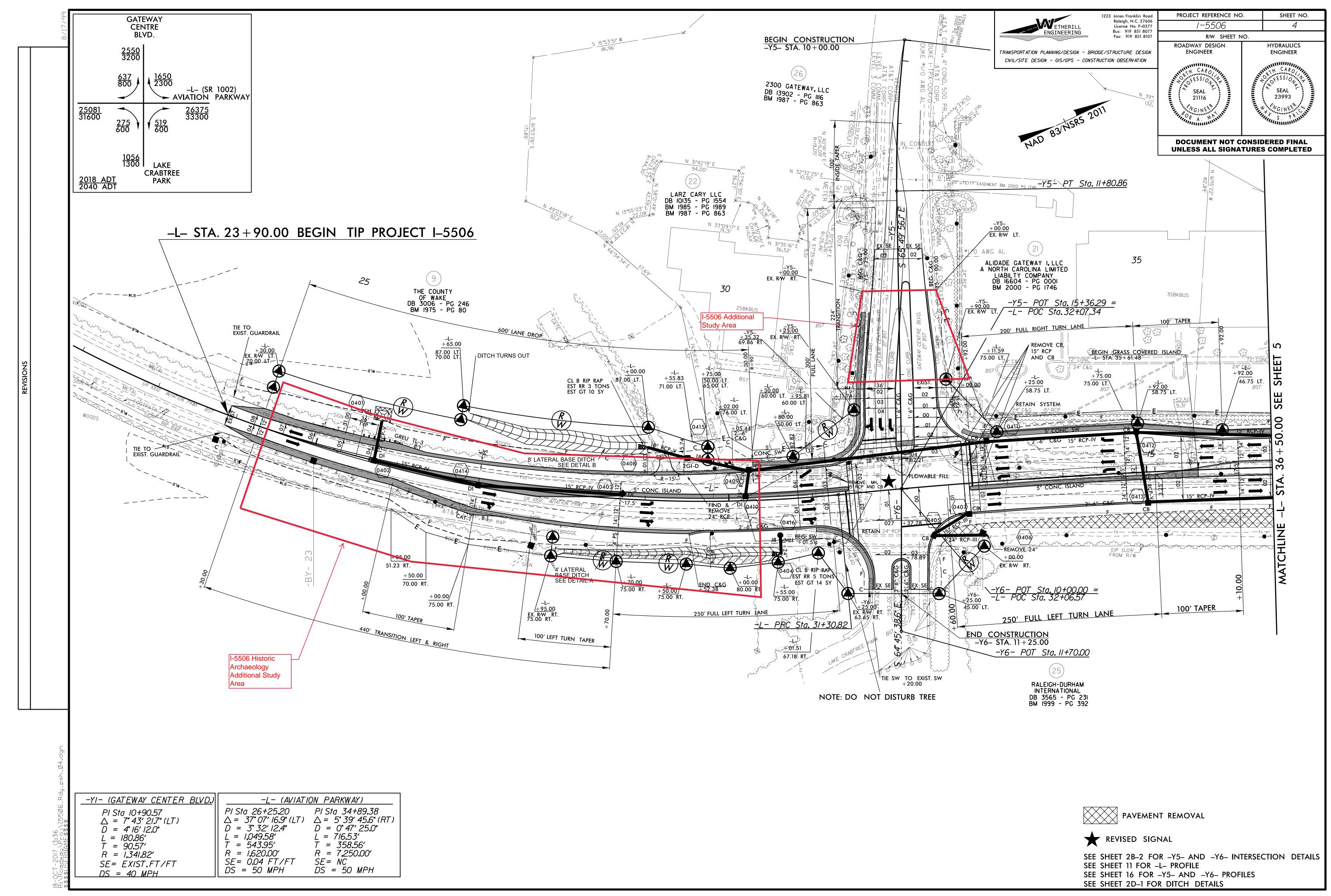
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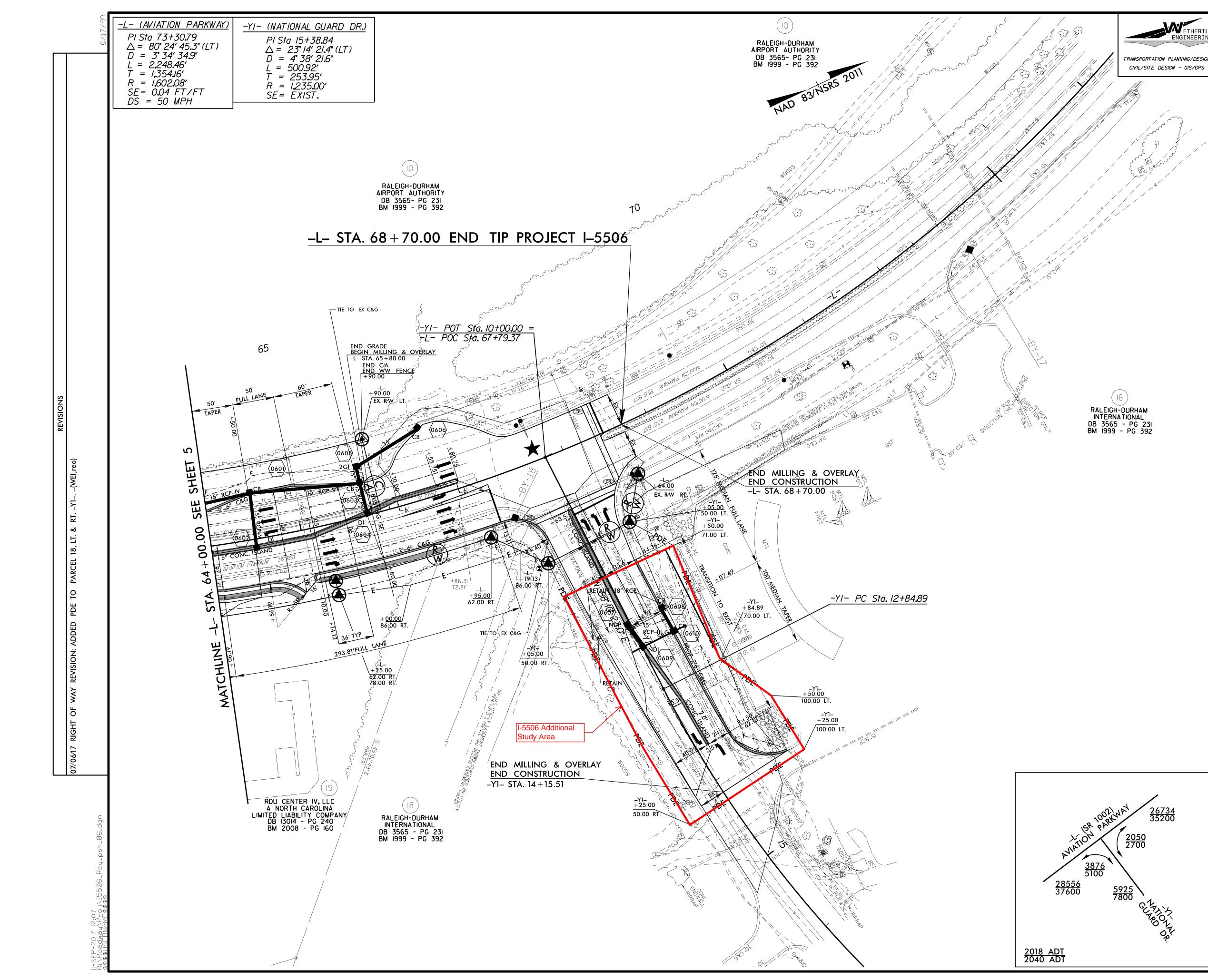
Federal Highway Administration **Division Administrator** 

Analysis Branch

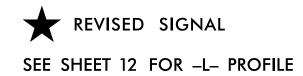
10/19/17 Date

- 3 -





	DOCUMENT NOT C UNLESS ALL SIGNA	ONSIDERED FINAL TURES COMPLETED
Fax: 919 851 8107 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	RW SHEET N ROADWAY DESIGN ENGINEER	IO. HYDRAULICS ENGINEER
Raleigh, N.C. 27606 ETHERILL License No. F-0377 ENGINEERING Bus: 919 851 8077	1-5506	6
1223 Jones Franklin Road		). SHEET NO.



# Tarascio, Eugene

From:Riffey, DeannaSent:Thursday, September 14, 2017 2:59 PMTo:Tarascio, EugeneSubject:RE: I-5506 Permit Surveys

No, NLEB was covered in the NRTR and the CE for this project.

## **Deanna Riffey**

Environmental Program Consultant Environmental Analysis Unit North Carolina Department of Transportation

919 707 6151 office driffey@ncdot.gov

Mail 1598 Mail Service Center Raleigh, NC 27699-1598

Physical Address 1020 Birch Ridge Drive Raleigh, NC 27610



*Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.* 

From: Tarascio, Eugene Sent: Thursday, September 14, 2017 2:46 PM To: Riffey, Deanna Subject: RE: I-5506 Permit Surveys

## Deanna,

Just confirming, was NLEB added to species list for Wake county since CE (8/30/17) or RW Consultation (2/23/17)? Thanks.

Gene

## **Eugene Tarascio**

Central Project Delivery Team C (Divisions 7, 9 &10) NCDOT Technical Services North Carolina Department of Transportation

919 707 6046 office gtarascio@ncdot.gov

1548 Mail Service Center

## Raleigh, NC 27699-1548



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From: Riffey, Deanna
Sent: Friday, August 25, 2017 1:50 PM
To: Tarascio, Eugene <gtarascio@ncdot.gov>
Subject: RE: I-5506 Permit Surveys

## Gene,

Surveys were updated for Michaux's sumac and red-cocked woodpecker (RCW) on May 15, 2017 by NCDOT biologists. No Michaux's sumac plants were located. RCW foraging habitat was found, however no nests were located during survey. A review of the North Carolina Natural Heritage Program (NHP) records, updated April 2017, indicates no known Michaux's sumac or RCW occurrence within 1.0 mile of the study area.

The northern long-eared bat has been added to the species list for Wake County since the CE was completed. The US Fish and Wildlife Service developed a 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. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where TIP I-5506 is located.

#### Deanna

## **Deanna Riffey**

Environmental Program Consultant Environmental Analysis Unit North Carolina Department of Transportation

919 707 6151 office driffey@ncdot.gov

Mail 1598 Mail Service Center Raleigh, NC 27699-1598

Physical Address 1020 Birch Ridge Drive Raleigh, NC 27610



*Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.*  From: Tarascio, Eugene Sent: Friday, August 25, 2017 11:49 AM To: Riffey, Deanna Subject: I-5506 Permit Surveys

Deanna,

Could you please send the date of when the surveys were completed? Thanks.

Gene

**Eugene Tarascio** Central Project Delivery Team C (Divisions 7, 9 &10) NCDOT Technical Services North Carolina Department of Transportation

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Project Tracking No. (Internal Use)

2<sup>nd</sup> resubmittal



# HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

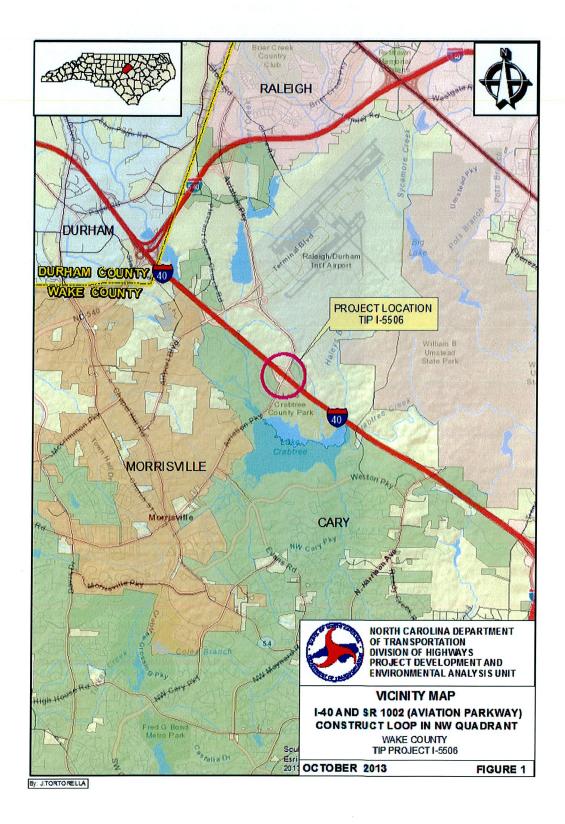
This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

# This form supersedes those dated December 13, 2013 and June 5, 2014

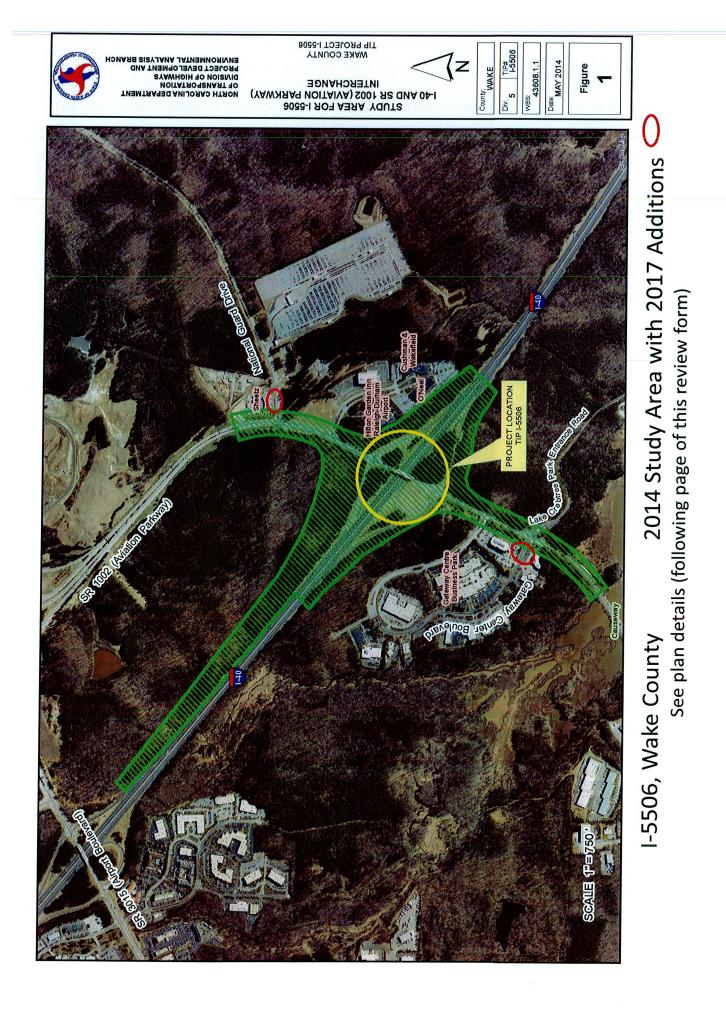
Project No:	I-5506	County:	Wake
WBS No.:	43608.1.1	Document Type:	
Fed. Aid No:	NHPP-040-7(154)	Funding:	State X Federal
Federal	Yes X No	Permit	
Permit(s):		Type(s):	
			Aviation Parkway) interchange
(no off-site detou	ar planned). Newly expand	ded study area	(original 2013 and first
revision 2014).			
SUMMAR	<b>Y OF HISTORIC ARCHI</b>	<b>FECTURE AN</b>	D LANDSCAPES REVIEW
<b>DESCRIPTION OF RE</b>	VIEW ACTIVITIES, RESULTS, AN	D CONCLUSIONS:	HPOWeb reviewed on 13 December
			D, DE, or SS properties in the Area
of Potential Effects (	APE). Wake County current GIS	S mapping, aerial	photography, and tax information
			arly-twentieth-century industrial and
			18 September 2017). Built in 1969,
	carries SR 1002 (Aviation Park		
			ng or aesthetic type. Google Maps
			tructures/landscapes in APE (viewed
	5 June 2014, and 18 September itectural survey is required f		s currently defined
			DR REASONABLY PREDICTING THAT
			AL OR LANDSCAPE RESOURCES IN
	APE now includes an additiona		
			encompass proposed construction
			and 2005-6) and related publication
recorded no properties in the APE (Kelly Lally, The Historic Architecture of Wake County, North Carolina (Raleigh: Wake			
			upport the absence of significant
architectural resources. No National Register-listed properties are located within the APE.			
Should the design of the project change, please notify NCDOT Historic Architecture as			
additional review may be necessary.			
SUPPORT DOCUMENTATION			
X Map(s)	Previous Survey Info.	Photos 🗌 🖸	Correspondence Design Plans
<b>FINDING BY NCDOT ARCHITECTURAL HISTORIAN</b>			
Historic Architecture and Landscapes NO SURVEY REQUIRED			
Vanessa Tatrick 18 September 2017			
NCDOT Architectu	ural Historian		Date

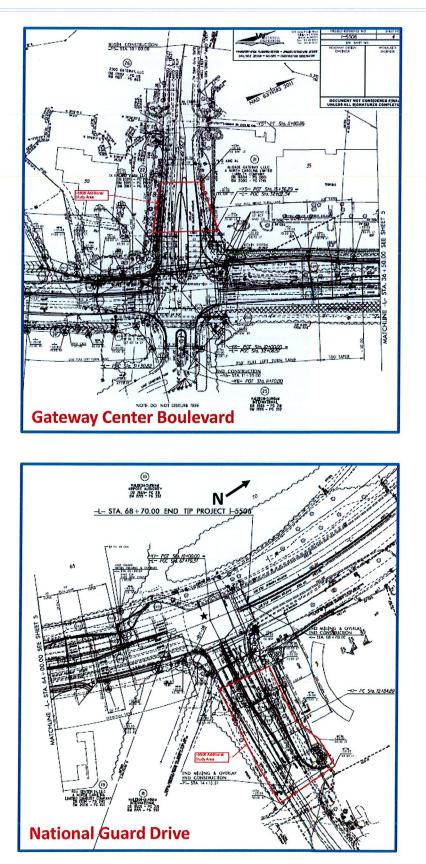
#### **PROJECT INFORMATION**

Historic Architecture and Landscapes NO SURVEY REQUIRED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.



SUBMIT (2) COPIES OF THIS FORM AND ATTACHMENTS TO NCDOT HUMAN ENVIRONMENT UNIT





I-5506, Wake County 2017 Study Area Additions Details from current design plans.

13-11-0006 SEPT 2017 Revision



# NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED FORM



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

## **PROJECT INFORMATION**

Project No:	I-5506	County:	Wake	
WBS No:	43608.1.1	Document:	CE	
F.A. No:	NHPP-040-7(154)284	Funding:	State	🛛 Federal
Federal Permit Required	?	No Permit	Type: na	

**Project Description:** NCDOT intends improvements at the existing interchange of I-40 and SR 1002 (Aviation Parkway) in Wake County. Federal funding and permits are expected, therefore Section 106 applies. At the time of the Cultural Resources review, no plans had been developed for this project; however, preliminary plans are under review as of September 2015. New right-of-way (ROW) and construction easements will be necessary to complete the project. For the purposes of the archaeological review, a study area encompassing roughly 138 acres will be considered the area of potential effects (APE), much of it disturbed by highway construction and other development. This project is adjacent to I-5700, PA # 14-09-0003, which consists of improvements to the interchange of I-40 and SR 3015 (Airport Boulevard). These two federally funded undertakings have overlapping APEs, and were combined for purposes of survey, evaluation and reporting. Separate PA forms have been created for each project; this form applies only to the SR 1002 (Aviation Parkway) project.

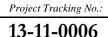
Review of additional, new APE immediately adjacent to the originally APE was requested in September 2017. Very small in scale, they include improvements at the already developed Gateway Center Blvd., National Guard Drive, and extension of a few hundred feet south from Gateway Center Drive and the Lake Crabtree Park entrance. Adobe .pdf files were provided of the new designs. All of these areas are considered altered by modern roadway construction and urban infrastructure resulting in a greatly increased probability for having a poor archaeological context concerning site preservation. No Further archaeological survey work is recommended, and the findings of the original "No NRHP Sites Present" documentation are still valid.

# SUMMARY OF ARCHAEOLOGICAL FINDINGS

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

$\boxtimes$	There are no National Register listed ARCHAEOLOGICAL SITES within the project's area
	of potential effects.
	No subsurface archaeological investigations are required for this project.
	Subsurface investigations did not reveal the presence of any archaeological resources.
	Subsurface investigations did not reveal the presence of any archaeological resources considered
	eligible for the National Register.
$\boxtimes$	All identified archaeological sites located within the APE have been considered and all
	compliance for archaeological resources with Section 106 of the National Historic
	Preservation Act and GS 121-12(a) has been completed for this project.
$\boxtimes$	There are no National Register Eligible or Listed ARCHAEOLOGICAL SITES present or
	affected by this project. (Attach any notes or documents as needed)
	"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED

form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.



## Brief description of review activities, results of review, and conclusions:

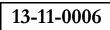
As noted on the Survey Required Form (dated July 8, 2014 and previously December 11, 2013), a number of archaeological investigations have occurred in the vicinity of the current project study area, and a handful of archaeological sites have been recorded in the vicinity of the proposed interchange improvements, though outside of this project's APE. While construction of the existing highway certainly affected some of the context for bearing significant archaeological sites in certain locations, there exists a moderate potential for the presence significant sites especially in locations removed further from the developed sections of the APE. On September 25, 2014, an archaeological reconnaissance was conducted to determine the potential for archaeological resources in the proposed APE. Based on this reconnaissance, the examination of aerial photography, and previous archaeological investigations in the Briar Creek/Crabtree Creek drainage basin, it was decided that an intensive archaeological investigation of the project area would be required. Given the proximity of the current project to the proposed improvements at the intersection of I-40 and SR 3015, Airport Boulevard (TIP No. I-5700, which also required additional intensive archaeological investigation), it was decided to combine the two projects into a single archaeological study.

The combined archaeological investigations were conducted periodically from February through April 2015 by Legacy Research Associates. This form will outline the results of those investigations, with a heavy emphasis on the findings of the investigations within the I-5506 project area. The detailed results of the combined archaeological investigations are reported in a separate document to be filed with the North Carolina Office of State Archaeology. The official results of the investigations conducted within the I-5700 study area will be outlined in a separate No National Register of Historic Places Eligible or Listed Archaeological Sites Present or Affected form (PA No. 14-09-0003).

As noted above, and in the preliminary investigations of the project area, commercial development following the opening of I-40 in late 1971, as well as the highway construction itself, dominate much of the landscape evolution in the project area. Raleigh-Durham Airport, the largest development in the vicinity, grew out of a set of three military training airstrips built in the area during WWII. Prior to the coming of the airport and I-40, land-use was dominated by single-crop agriculture and widespread clearing of vegetation. As a result, soil deflation and erosion have been severe problems in this portion of the Piedmont. The implications for general site preservation in the area were not overly promising, but it was still hoped that an examination of the remaining cultural resources in the project area might garner a greater understanding of the evolution of the landscape over a long time scale, as well as a much more detailed criteria for assessing local archaeological resources.

In 1978, an archaeological survey conducted on behalf of the Raleigh-Durham Airport Authority (Hall and Littleton 1978) identified 33 archaeological sites, three of which are situated in the vicinity of the I-5506 project area (sites 31Wa125, 31Wa126, and 31Wa127) though outside of the APE. All three of these sites can be characterized as small prehistoric lithic scatters or artifact isolates. Site 31Wa125 yielded a possible Kirk cspp/k while 31Wa126 produced a biface fragment and only quartz debitage at 31Wa127. None of these sites was considered to be archaeologically significant.

Legacy Research Associates conducted intensive archaeological investigation in 130 acres of the combined 280 acres encompassed by the I-5506 and I-5700 project areas. These 130 acres of tested APE represent areas that were not initially excluded from the investigations due to severe disturbance from development. A total of 490 shovel test pits were excavated as part of the testing program using tests placed systematically on 20-meter intervals, judgmentally placed tests to investigate particular features or locations, and tests used to document suspected disturbances within the area subjected to testing. This combination of probabilistic and non-probabilistic testing identified 19 archaeological resources in the combined I-5506 and I-5700 project areas. Of these 19 archaeological resources, fifteen are located within the APE established for the I-5506 project (31Wa1933, 31Wa1934, 31Wa1935, 31Wa1936/1936\*\*, 31Wa1937, 31Wa1938, 31Wa1939, 31Wa 1943, 31Wa1945, 31Wa1946, 31Wa1947, 31Wa1948, 31Wa1949/1949\*\*, 31Wa1950\*\*, and 31Wa1951/1951\*\*).



For the TIP # I-5506 portion of the investigations (Aviation Parkway), these sites consist of prehistoric and historic remains, and sometimes both at the same location. Generally, the prehistoric components were noted as "lithic scatters" for the site type based on the scarcity of artifacts and lack of diagnostic tools. At site 31Wa1938 the presence of an Early Archaic chipped stone projectile point/knife base and a Middle Archaic Morrow Mountain II chipped stone projectile point/knife, the scatter was attributed to include the Early and Middle Archaic period. The historic sites include 31Wa1936/1936\*\*, 31Wa1949/1949\*\*, 31Wa1950\*\*, and 31Wa1951/1951\*\*. While these were generally categorized as "domestic" site types from early to mid 20<sup>th</sup> century farmsteads, 31Wa1936/1936\*\* yielded a single 18<sup>th</sup> to 19<sup>th</sup> century ceramic, pearlware, as a lone isolated find.

Overall, the study conducted by Legacy Research Associates revealed a number of considerations with regards to archaeological resources along the I-40 corridor in Wake County and adjacent areas. The dominant consideration, unsurprisingly, is the high level and pace of landscape alteration that has occurred in this portion of the North Carolina Piedmont. Between clearing and agricultural activities that have caused soil erosion/deflation in the region and the more direct impacts from transportation and commercial development in the modern era, depositional contexts are frequently compromised. Prehistoric sites identified in this area have been pretty consistently characterized as small lithic scatters composed of quartz and metavolcanic debitage associated with toolkit maintenance (rather than toolkit creation or raw material processing). Diagnostic tools that occasionally appear in the assemblages generally date to the mid- and late Holocene. Sites like these may not suffer context degradation from soil deflation as badly as other types of sites, but they also tend to be poor candidates for National Register inclusion. Prehistoric sites that might break out of this pattern could suggest a degree of significance on that fact alone. Historic resources identified in the area generally tend to be characterized as domestic or agricultural sites, which are largely consistent with the picture of historic occupation for the region. An assemblage and site that might be able to adequately convey its significance might provide further detail into these lifeways, but the history of landscape evolution surrounding the airport and I-40 suggests that such well-preserved contexts would be rare.

As noted above, 19 archaeological resources were identified through the combined investigations for I-5700 and I-5506. None of the archaeological resources was considered to be eligible for the National Register of Historic Places. No further archaeological investigations are recommended for the proposed conversion of the existing interchange at I-40 and SR 1002, Aviation Parkway, to a diverging diamond interchange. The area of potential effects studied during this archaeological investigation allows for several variations in final design. Should the project change further investigation may be necessary. The project as described should be considered to be compliant with Section 106 and NCGS121-12a.

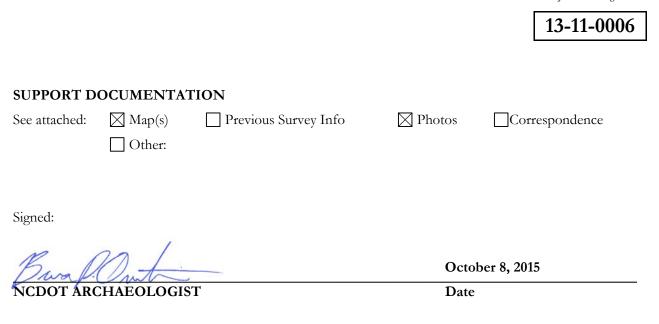
#### References:

#### Hall, W.K. and T. R. Littleton

1978 *Cultural Resources Survey of the Raleigh-Durham Airport Area.* Prepared for Raleigh-Durham Airport Authority by Coastal One Resources Division, Ocean Data Systems, Inc., Wilmington, North Carolina.

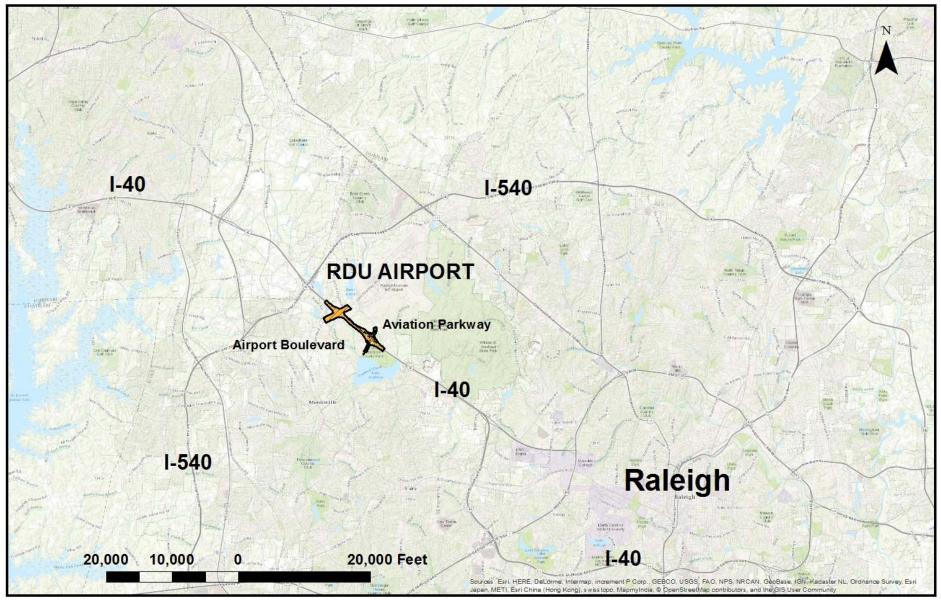
#### Legacy Research Associates

2015 Archaeological Survey and Evaluation for Two Intersection Improvements, I-40 at SR 1002 (Aviation Parkway) – TIP I-5506 (WBS No. 43608.1.1) PA Tracking No. 13-11-0006, Federal Aid Number NHPP-040-7(152)284; I-40 at SR 3015 (Airport Boulevard) – TIP I-5700 (WBS No. 50118.1.FS1) PA Tracking No. 14-09-0003, Federal Aid NumberNHPP-040-1(259)286; Wake County, North Carolina. MS. On file, North Carolina Department of Transportation, Archaeology Group, Raleigh.



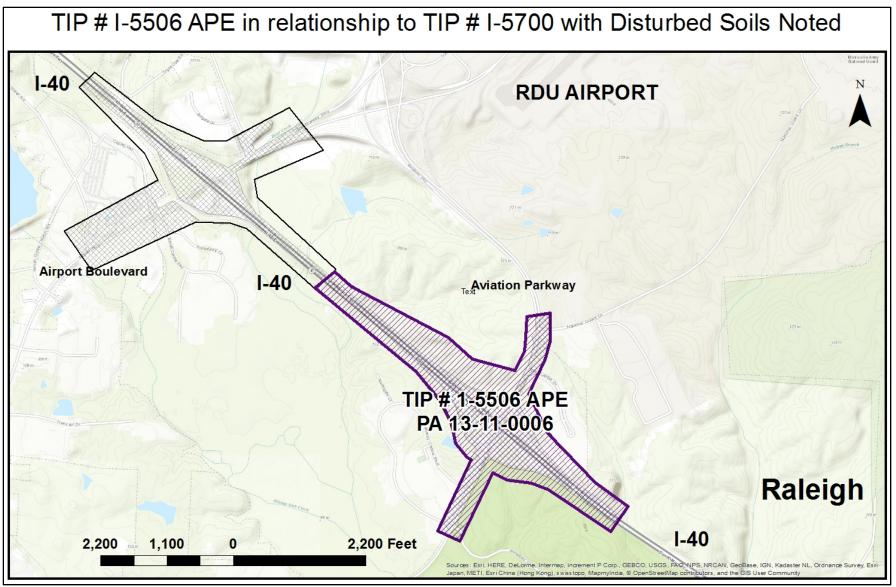
13-11-0006

# TIP I-5506 and TIP I-5700 Combined Archaeological Area of Potential Effects



<sup>&</sup>quot;NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

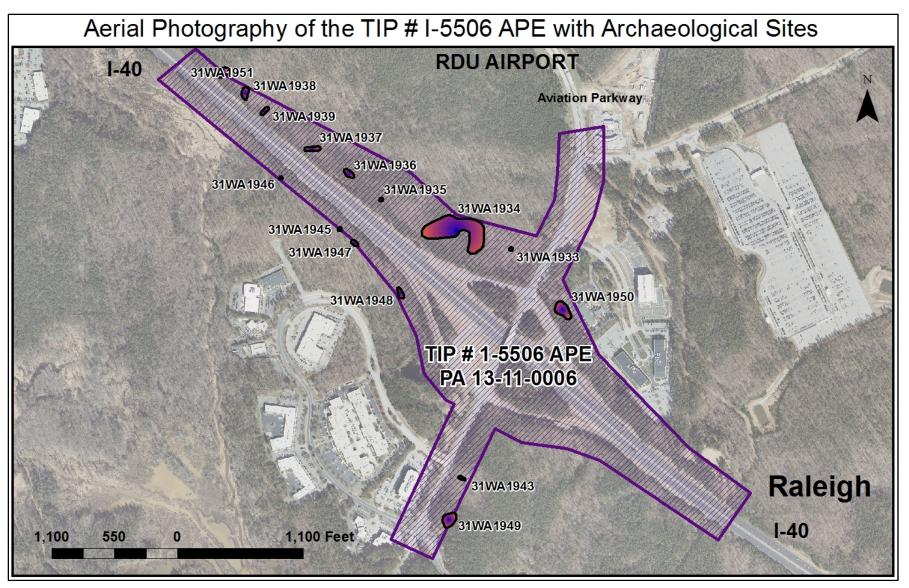
13-11-0006



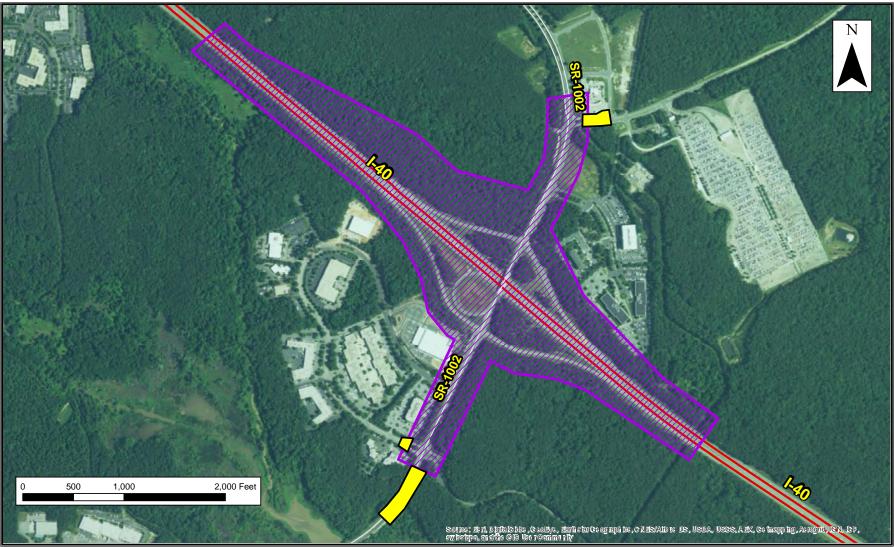
The above illustration shows both related interchange projects' APE with a bold outline for TIP # I-5506. Obviously disturbed areas are cross-hatched.

"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

13-11-0006



Aerial photograph of the I-5506 APE illustrating the locations of the archaeological resources identified that are associated with the Aviation Parkway interchange, PA 13-11-0006.



Aerial photograph of the I-5506 project area showing the original surveyed area as a purple, hashed polygon. About half of the APE soil was considered modified by road construction and other urbanization. Three new additional locations required additional archaeological consideration in September 2017, and are illustrated here as bright yellow polygons with black borders. Note, these locations overlap existing transportation facilities and are generally considered to have a lowered probability to contain intact, significant archaeological remains.