

## Type III Categorical Exclusion Action Classification Form

STIP Project No.	<u>I-5711</u>
WBS Element	<u>50401.1.FS1</u>
Federal Project No.	<u>NHPP-040-4(161)220</u>

### A. Project Description:

The I-40/I-85 Interchange Improvements at SR 1007 (Mebane Oaks Road) project is included in the NCDOT 2018-2027 *State Transportation Improvement Program* (STIP) as STIP Project I-5711. The project is located partially within the city limits of Mebane, in Alamance County, North Carolina (see Figures 1 and 2).

### B. Description of Need and Purpose:

The proposed project will address the following needs:

#### 1. Safety

The accident rate along Mebane Oaks Road, between Forest Oaks Lane and Arrowhead Boulevard is nearly five times the average statewide rate for a similar facility. "Rear-end" accidents account for nearly one-third of all accidents, followed by "angle" and "sideswipe" accidents.

#### 2. Traffic Congestion

The intersections along Mebane Oaks Road at Forest Oaks Lane, and the I-40/I-85 eastbound and westbound ramp termini experience poor levels of service (LOS E or worse) in the Future No-Build (2040) scenario.

The purpose of the project is to reduce congestion and improve safety along Mebane Oaks Road at the I-85/I-40 interchange.

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

D. Proposed Improvements: The proposed improvements consist of widening the existing bridge and roadway approaches (see Figures 3 and 4). Bicycle lanes and sidewalk will

be provided along both sides of the bridge and roadway throughout the project. Ramp B (northwest quadrant) will be widened to accommodate the northbound dual left-turn lanes proposed on Mebane Oaks Road.

E. Special Project Information:

The estimated costs, based on 2017 prices, are as follows:

**Table 1: Estimated Costs**

Description	Alternative 1 Tight Diamond Interchange (Preferred)
Roadway	\$ 2,588,000
Structure	\$ 3,773,000
Misc. & Mob.	\$ 1,289,000
Eng. & Contingencies	\$ 1,150,000
Total Construction Cost	\$ 8,800,000
Right-of-way Costs	\$ 3,216,000
Utility Relocation Costs	\$ 800,000
Total Project Cost	\$ 12,816,000

**Estimated Traffic:**

- Current (2016) - 9,400 – 28,200 vehicle per day (vpd) (Mebane Oaks Road)  
99,600 – 101,700 vpd (I-85 / I-40)
- Future (2040) - 10,200 – 30,200 vpd (Mebane Oaks Road)  
137,600 – 139,200 vpd (I-85 / I-40)
- TTST - 1% (Mebane Oaks Road)  
11% (I-85 / I-40)
- Dual - 2% (Mebane Oaks Road)  
3% (I-85 / I-40)

For a more detailed discussion of the traffic forecast, analysis and results, please refer to the *I-5711 Interchange Improvements at I-85/I-40 and Mebane Oaks Road Traffic Technical Memorandum* (April 2015) which can be viewed by visiting the NCDOT Project Management Unit located at 1000 Birch Ridge Drive, Bldg. A, Raleigh, NC 27610.

**Accidents:** Crash data was provided by the NCDOT Safety Planning Group in May 2015. The data covers a 5-year period from May 2010 through April 2015. Over this period, 294 crashes were reported in the project study area. Of these, 67 crashes occurred along I-85/I-40 and 227 were reported on Mebane Oaks Road between Garrett Crossing and NC 119 (Fifth Street). The dominant accident type was “rear end,” which accounted for nearly one third of the accidents reported in the project study area, followed by accident types “angle” and “sideswipe, same direction.” These types of crashes are common on congested roadways. Nearly 70 percent of the crashes along Mebane Oaks Road occurred in the area of the interchange, i.e. the ramp termini and adjacent intersections. No fatalities were reported for any of these accidents. In general, crash rates along segments of Mebane Oaks Road are well above the statewide rates for urban secondary roads in several categories. For a more detailed discussion and analysis of the crash rates, please refer to the *Crash Analysis Summary* (June 2015) which can be viewed by visiting the NCDOT Project Management Unit located at 1000 Birch Ridge Drive, Bldg. A, Raleigh, NC 27610.

**Pedestrian and Bicycle Accommodations:** A bicycle route is present on Mebane Oaks Road through the I-85/I-40 interchange. It is noted in the Burlington Graham Metropolitan Planning Organization Comprehensive Transportation Plan that this is an existing bicycle facility needing improvement. This route is also shown on the Alamance County Bicycle Map. In keeping with these plans, bicycle facilities will be provided on the improved interchange. The project’s design alternatives include a 4-foot bicycle lane adjacent to 12-foot wide travel lanes, which will have a 35-mph posted speed limit. Bicycle-safe railing will be included across the interchange structure. Pedestrian facilities are also included on the design alternatives, throughout the project length. These consist of a 5-foot wide concrete sidewalk separated from the travel way by the 4-foot bike lane, 2-foot, 6-inch concrete curb and gutter, and a 4-foot planting strip, where feasible.

**Farmlands:** As is required by the Farmland Protection Policy Act, a farmland impact rating (Form NRCS-AD-1006) has been conducted for this project, in keeping with FHWA guidelines. The project scored a total point value of 6 out of 160 points, which is below the NRCS minimal criteria for mitigation. As a result, it has been concluded that

this project will not have a significant impact to farmland, and farmland impacts do not need to be evaluated further. No alternatives other than those discussed in this document will be considered without a re-evaluation of the project's potential impacts upon farmland.

There are no Voluntary and Enhanced Voluntary Agricultural Districts (VAD/EVAD) located in the Direct Community Impact Area (DCIA).

### **Alternatives:**

**No Build Alternative** – The No-Build Alternative is defined as leaving the existing road network within the project area as it is, without improvements, into the design year (2040) and instead simply continuing ongoing maintenance activities. It is expected that selection of the No-Build Alternative would result in further degradation of traffic operations, greater congestion, higher crash rates and would not meet the purpose and need for the project. Therefore, this alternative was eliminated from further consideration.

**Build Alternative** – Two design alternatives were considered for the project.

#### Alternative 1: Tight Diamond Interchange (Preferred)

The Tight Diamond Interchange (TDI) Build Alternative will add capacity along Mebane Oaks Road through the interchange area. The proposed lane configuration includes two through lanes and two left-turn lanes in both the northbound (NB) and southbound (SB) directions across I-85/I-40. (See Figure 3)

Widening on Mebane Oaks Road, north and south of the interchange, is required to accommodate the additional lanes across I-85/I-40. The approach roadway will be a curb and gutter facility consisting of 12-foot wide lanes, 4-foot wide bike lane, and 5-foot wide concrete sidewalk along both sides of the roadway (see Figure 3). Also, modifications including widening and/or re-striping are required on the I-85/I-40 exit and entrance ramps for more efficient traffic operations. No improvements are anticipated to extend beyond the gore area where the ramps meet I-85/I-40.

The existing bridge will be widened symmetrically to provide a 123-foot wide clear roadway width between the bridge railings. The widened structure will accommodate four 12-foot lanes, one 6-foot wide bike lane (including 2-foot wide gutter), and one 5-foot, 6-inch wide sidewalk in each direction. (See Figure 3)

Alternative 1 will require no changes in access.

The leadership of NCDOT Highway Division 7 conferred with the City of Mebane and both agreed that Alternative 1 should be designated as the Preferred Alternative.

### Alternative 2: Diverging Diamond Interchange

The Diverging Diamond Interchange (DDI) Build Alternative will add capacity along Mebane Oaks Road through the interchange area. The proposed lane configuration will use two through lanes and a combination through/left-turn lane in both the NB and SB directions across I-85/I-40. Widening on Mebane Oaks Road, north and south of the interchange, will be required to develop lanes. Also, modifications including widening and re-striping, will be required on the I-85/I-40 exit and entrance ramps to accommodate the new interchange configuration. Improvements that extend beyond the gore area where the ramps meet the interstate are not expected to be required.

Alternative 2 (DDI) was eliminated from further consideration, for the following reasons:

1. Changes to existing traffic patterns required with the DDI will limit access at the Mebane Oaks Road/Forest Oaks Lane intersection to right-in/right-out only, which is not considered desirable.
2. Wilson Road would need to be extended to tie to Mebane Oaks Road across from the Garrett Crossing entrance (signalized intersection), thereby increasing project costs.
3. The DDI will increase impacts to adjacent properties, particularly in quadrants C and D, due to the geometry of the roadway approaches to the DDI.
4. This alternative will result in higher construction and right-of-way costs, due to the additional length required for the improvements, the extension of Wilson Road, and impacts to adjacent properties.

**Design Exceptions:** A design exception may be required for vertical clearance between I-40/I-85 and the superstructure of the widened bridge.

**Work Zone Traffic Control:** Traffic will be maintained through the work zone during the construction period. There will be periods during bridge construction when I-40/I-85 will need to be shut down for placement of structural girders over the travel lanes. This work would occur at night with interstate traffic shifted onto the exit and entrance ramps. No daytime closures of I-40/I-85 are anticipated although lane reductions/shifts can be expected.

**Business Relocations:** Implementation of the Preferred Alternative will result in the relocation of one business, a BP gas station located at 1121 Mebane Oaks Road. The Relocation Report (July 28, 2017), in its entirety, can be found in the Appendix. No other businesses or residences are expected to be relocated.

**Public Involvement:** A local officials meeting was held on August 31, 2017 at the Mebane Arts and Community Center in Mebane, NC. Representatives from the City of Mebane and NCDOT were in attendance. A question and answer session followed a brief presentation by HW Lochner. Concerns included:

1. Consideration of a DDI (Diverging Diamond Interchange) concept,
2. Improvements continuing down Mebane Oaks Road to Old Hillsborough Road,
3. Crosswalks at intersections,
4. Direct access to Mebane Oaks Road,
5. Emergency vehicles and traffic signal preemption.

Responses to these concerns were favorable to those in attendance. No other concerns were raised.

A Public Meeting was conducted on September 14, 2017 at the Mebane Arts and Community Center in Mebane, NC. The meeting was an informal, drop-in type meeting held from 5:00 – 7:00 PM. Project representatives from NCDOT and HW Lochner were in attendance to answer questions related to the project. Approximately 29 interested citizens attended the meeting. The comment period for this project ends October 5, 2017. There was one comment received from the general public and two comments received from the City of Mebane. Comments received, along with NCDOT responses, include:

1. Difficulty making a left turn from Mebane Oaks Road to Brundage Lane given the opposing traffic stream from I-40/I-85 making the right on red movement.

NCDOT Response: The NCDOT Division staff will evaluate the existing conditions at the intersection and determine if revisions to the signal timing/phasing is warranted.

2. The City Fire Chief from the Mebane Fire Department requests inclusion of a GPS Preemption System within the project limits.

NCDOT Response: The NCDOT will design and install a GPS Preemption System with reimbursement from the City for initial costs for equipment and long-term maintenance as outlined in a municipal agreement.

3. The City of Mebane's comments include:
  - a. Reducing the width of the travel lanes to accommodate a wider bike lane,
  - b. In lieu of sidewalks, include a 10-foot wide multi-use path at the same grade as the roadway and separated by a four-foot concrete barrier.

NCDOT Response: The NCDOT will provide a 6-foot wide bike lane on the roadway approaches to the bridge. The berm behind the curb and gutter will be reduced to 8 feet to accommodate the wider bike lane.

The NCDOT sent written responses to the individuals who provided the comments above.

F. Project Impact Criteria Checklists:

<u>Type III Actions</u>		Yes	No
If the proposed improvement is identified as a Type III Class of Action answer all questions. <ul style="list-style-type: none"> <li>• The Categorical Exclusion will require FHWA approval.</li> <li>• If any questions are marked “yes” then additional information will be required for those question in Section G.</li> </ul>			
1	Does the project involve potential effects on species listed with the US Fish and Wildlife Service (USFWS) or National Marine Fisheries (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 (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 checked="" type="checkbox"/>	<input type="checkbox"/>
16	Does the project require work encroaching and adversely effecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input type="checkbox"/>	<input checked="" type="checkbox"/>



<u>Type III Actions (continued)</u>		Yes	No
If the proposed improvement is identified as a Type III Class of Action answer all questions. <ul style="list-style-type: none"> <li>• The Categorical Exclusion will require FHWA approval.</li> <li>• If any questions are marked “yes” then additional information will be required for those question in Section G.</li> </ul>			
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. USFS, USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input 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

**Response to question 15**

The NCDOT GeoEnvironmental Section searched the GIS databases within the project limits to identify known potential hazardous waste sites. Six underground storage tanks were identified within the project limits. These sites are associated with fuel storage, therefore the anticipated impact is “petroleum contaminated soil” and the anticipated risk is “low.” (See correspondence dated March 30, 2016.)

**Response to Question 22**

Minor shifts to the Control of Access along Mebane Oaks Road will be required, due to the proposed widening. Access to adjacent properties and intersecting roads will remain unchanged.

H. Project Commitments

**Alamance County**  
**I-85/I-40 Interchange Improvements at SR 1007 (Mebane Oaks Road)**  
**Federal Project No. NHPP-040-4(161)220**  
**WBS No. 50401.1.FS1**  
**TIP No. I-5711**

**Hydraulics Unit, Natural Environment Section**

The project shall adhere to Jordan Lake Buffer Rules.

**Division 7 Construction**

Hurdle Field-4W7, a grass air strip, is located to the northwest of the project. Coordination with the air strip will take place during construction to insure that construction equipment does not violate any FAA air surfaces.

**Division 7 Traffic**

A Municipal Agreement with the City of Mebane will be necessary if the City of Mebane Fire Department formally requests a GPS Preemption System within the project limits.



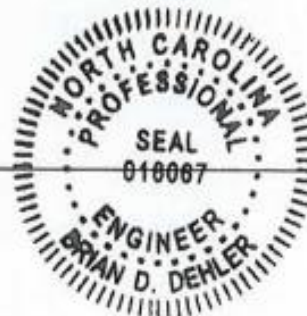
I. Categorical Exclusion Approval

STIP Project No. I-5711  
WBS Element 50401.1.FS1  
Federal Project No. NHPP-040-4(161)220

Prepared By:

11/28/2017  
Date

Brian D. Dehler  
Brian D. Dehler, PE, Senior Project Manager  
H. W. Lochner, Inc.



Prepared For: North Carolina Department of Transportation

Reviewed By:

11/30/17  
Date

Beverly G. Robinson  
Beverly G. Robinson, CPM, Sr. Project Manager  
NCDOT Project Management Unit

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

11/30/17  
Date

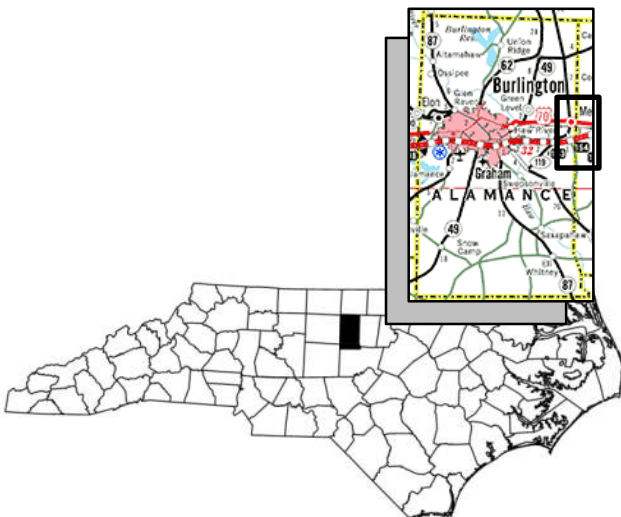
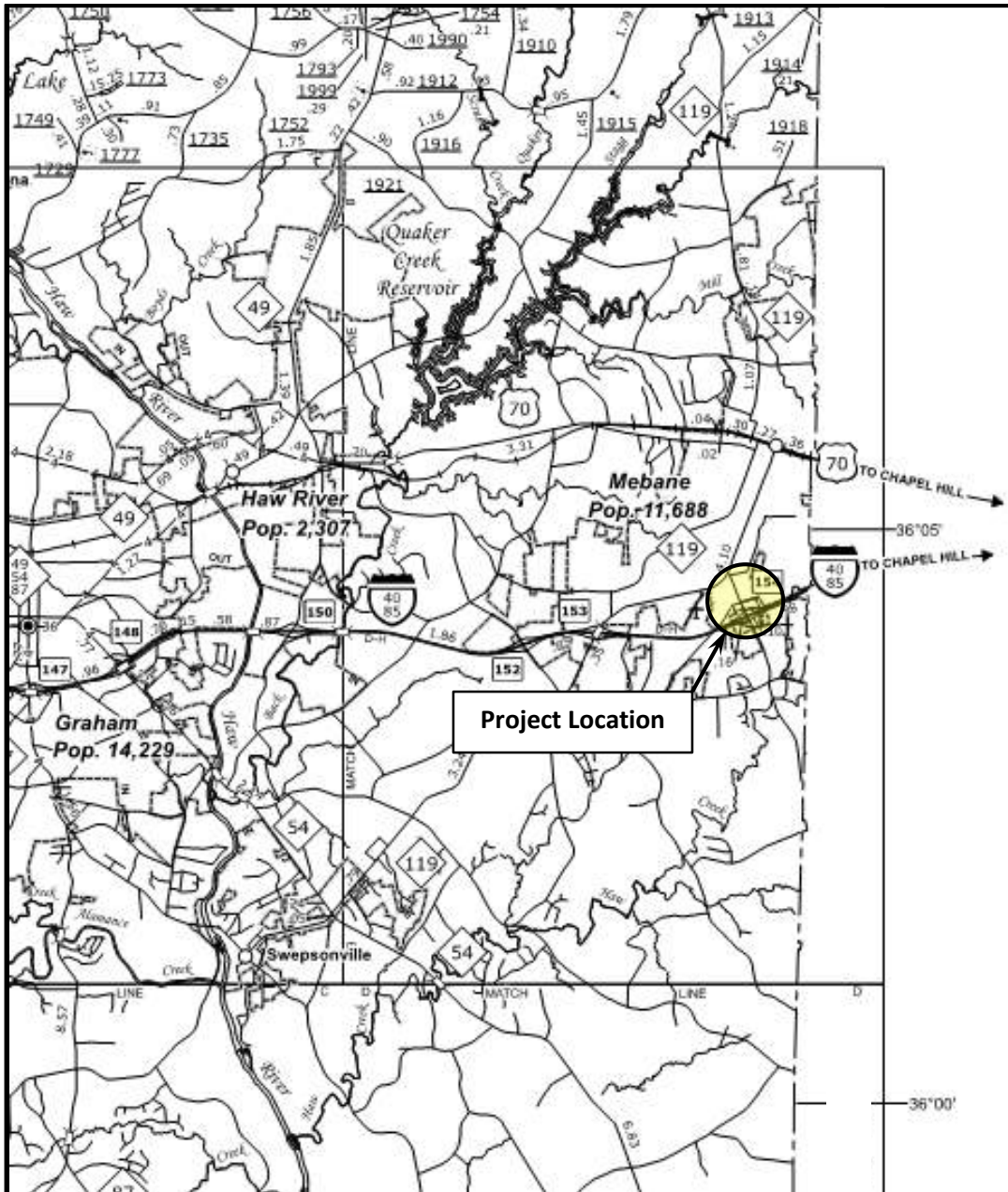
Laura E. Sutton  
Laura Sutton, PE, Team Lead  
NCDOT Project Management Unit


FHWA Approval:

12/4/17  
Date

Joseph P. Aeigle  
for John F. Sullivan, III, PE, Division Administrator  
Federal Highway Administration

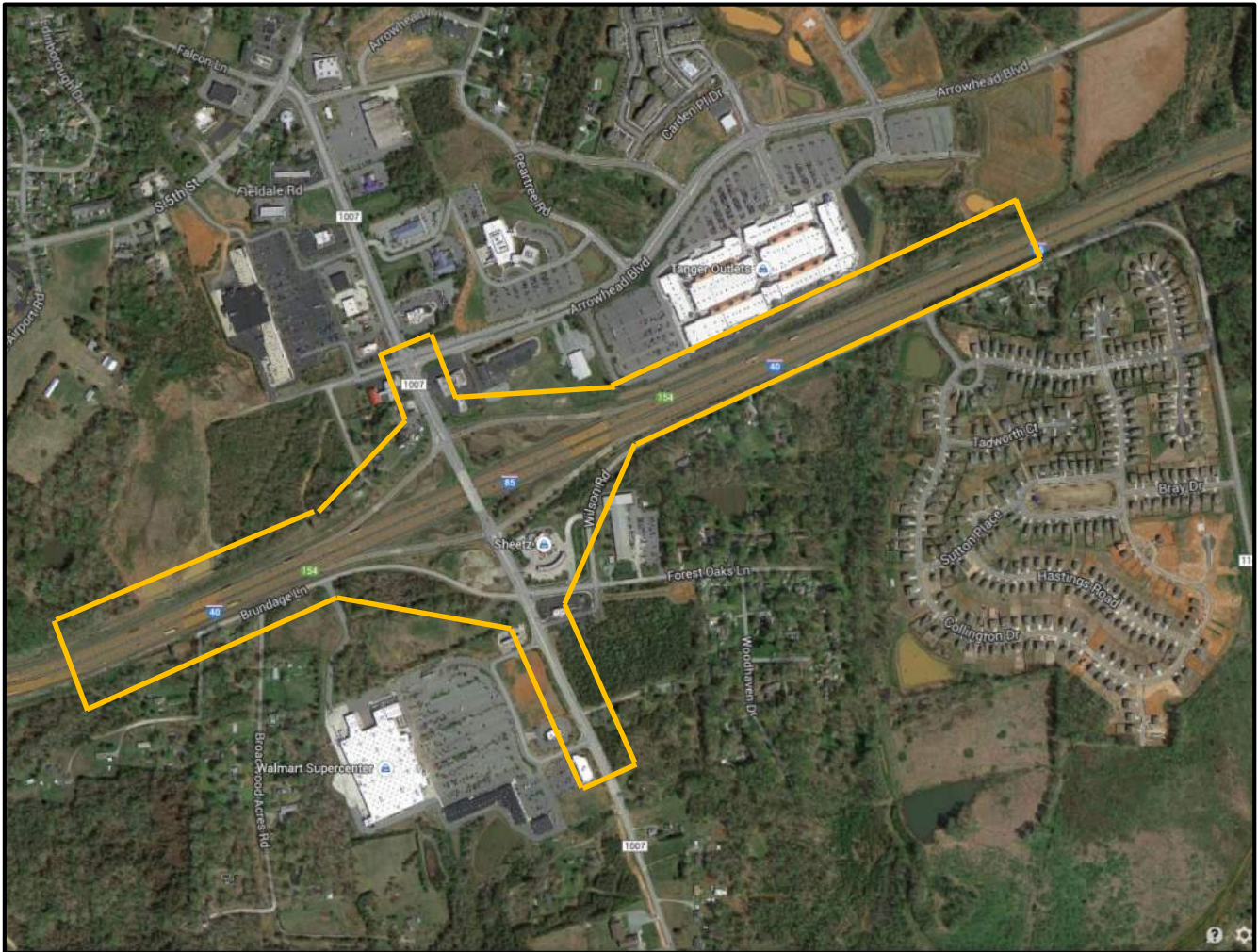




	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT</p>
<p><b>I-85/I-40 Interchange Improvements at SR 1007 (Mebane Oaks Rd) I-5711 Alamance County</b></p>	
<p><b>FIGURE 1</b></p>	





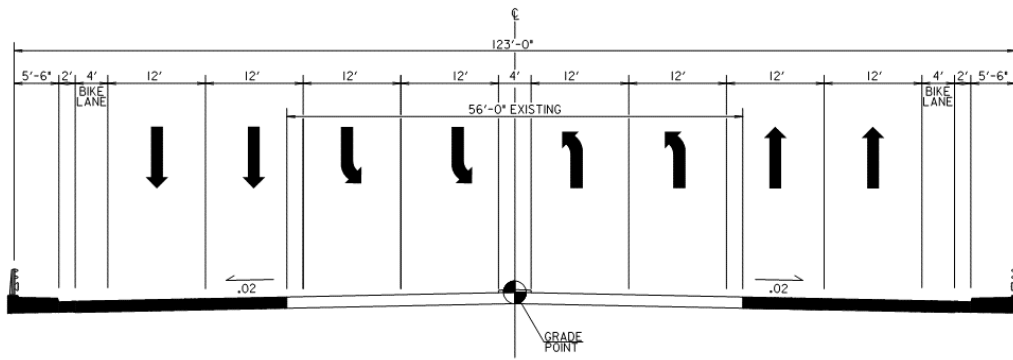


NORTH CAROLINA DEPARTMENT  
OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PROJECT DEVELOPMENT AND  
ENVIRONMENTAL ANALYSIS UNIT

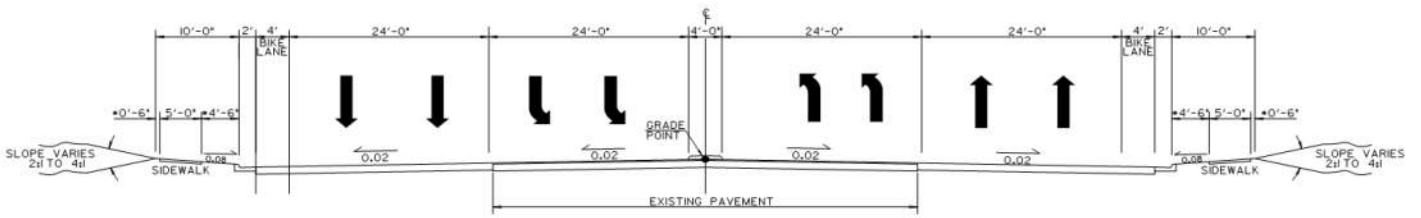
**I-85/I-40 Interchange Improvements at  
SR 1007 (Mebane Oaks Rd)  
I-5711  
Alamance County**

**FIGURE 2 – Study Area**






-L- TYPICAL SECTION ON STRUCTURE



\* VARIES - SEE PLANS FOR SIDEWALK LOCATION

-L- TYPICAL SECTION APPROACHING STRUCTURE

	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT</p>
<p>I-85/I-40 Interchange Improvements at SR 1007 (Mebane Oaks Rd) I-5711 Alamance County</p>	
<p><b>FIGURE 3</b></p>	





**LEGEND**

- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS
- EXISTING RIGHT OF WAY
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- BUILDINGS
- LAKES, RIVER, STREAMS AND PONDS
- PROPOSED CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CITY OR TOWNSHIP LIMITS
- PROPERTY LINES
- PROPOSED STRUCTURES, ISLANDS, C & G AND SIDEWALKS
- EXISTING STRUCTURES TO BE RETAINED
- EXISTING STRUCTURES & ISLANDS TO BE REMOVED
- PRESENT ADT
- FUTURE ADT
- EXISTING TRAFFIC SIGNAL

**DESIGN DATA**

Functional Class. = Arterial  
 Design Speed = 40 mph  
 Max. Superelev. = 0.06

INCOMPLETE PLANS  
 PRELIMINARY PLANS

(ENGLISH)

**PUBLIC MEETING MAP**

S.T.I.P. NO. I-5711  
 FEDERAL AID PROJECT NO. NHPP-040-4(161)220  
 WBS NO. 5040.LFS1

**ALAMANCE COUNTY**

INTERCHANGE IMPROVEMENTS  
 AT I-85/40 AND SR 1007 (MEBANE OAKS ROAD)

SHEET 1 OF 1

**DESIGN DATA**

Functional Class. = Major Collector  
 Design Speed = 40 mph  
 Max. Superelev. = 0.06

INCOMPLETE PLANS  
 PRELIMINARY PLANS

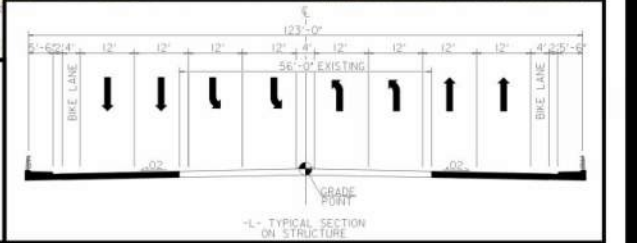
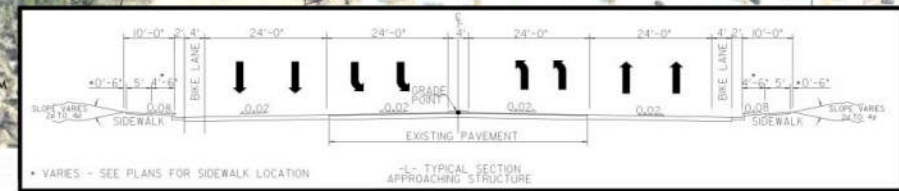
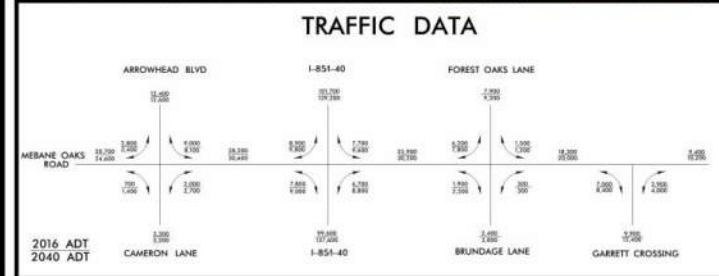
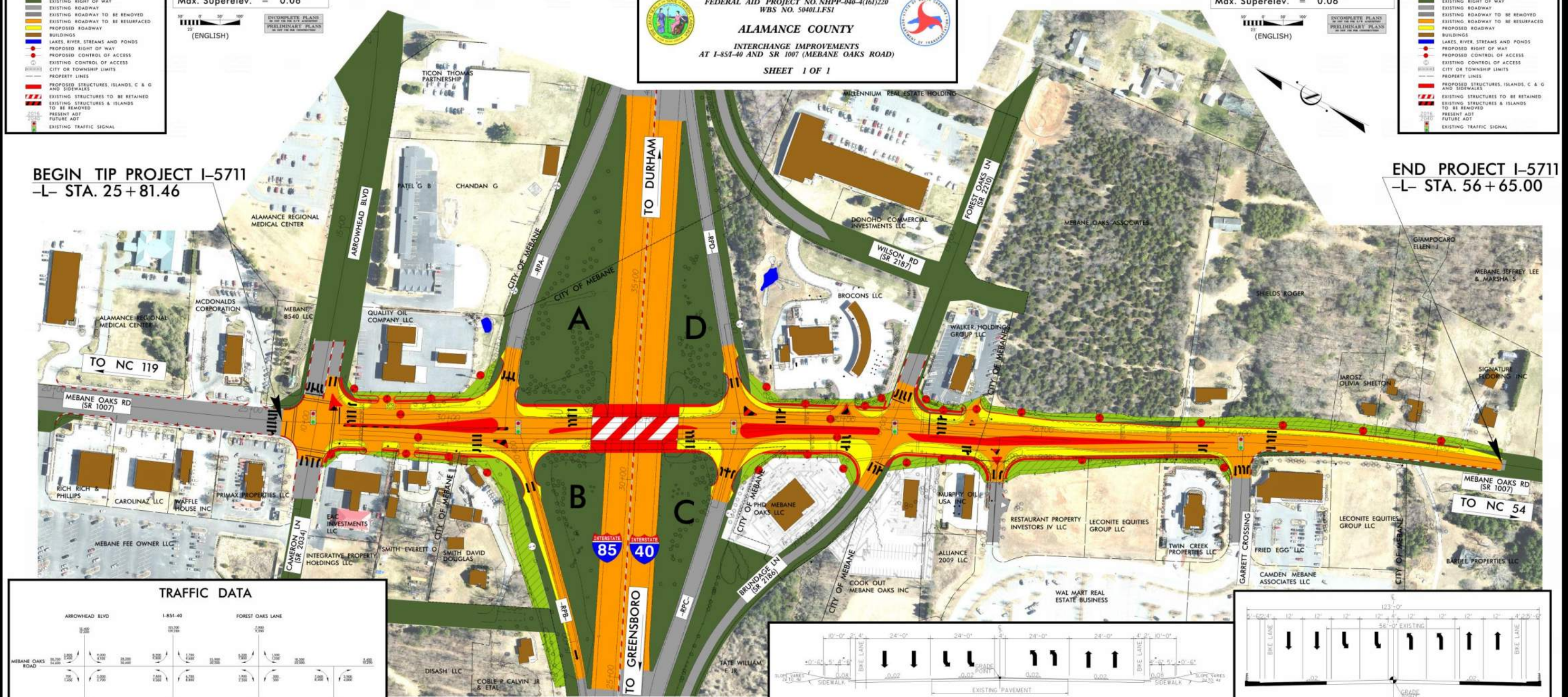
(ENGLISH)

**LEGEND**

- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS
- EXISTING RIGHT OF WAY
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- BUILDINGS
- LAKES, RIVER, STREAMS AND PONDS
- PROPOSED CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CITY OR TOWNSHIP LIMITS
- PROPERTY LINES
- PROPOSED STRUCTURES, ISLANDS, C & G AND SIDEWALKS
- EXISTING STRUCTURES TO BE RETAINED
- EXISTING STRUCTURES & ISLANDS TO BE REMOVED
- PRESENT ADT
- FUTURE ADT
- EXISTING TRAFFIC SIGNAL

BEGIN TIP PROJECT I-5711  
 -L- STA. 25+81.46

END PROJECT I-5711  
 -L- STA. 56+65.00



**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

DIVISION OF HIGHWAYS  
 PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

**I-85/I-40 Interchange Improvements at SR 1007 (Mebane Oaks Rd)**

I-5711  
 Alamance County

**FIGURE 4**





15-04-0035



## ARCHAEOLOGICAL SURVEY REQUIRED 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-5711** County: **Alamance**  
 WBS No: **50401.1.FS1** Document: **CE**  
 F.A. No: **NHPP-040-4(161)220** Funding:  State  Federal  
 Federal Permit Required?  Yes  No Permit Type: **na**

**Project Description:** NCDOT intends to improve the interchange at I-85/I-40 and SR 1007, Mebane Oaks Road in Alamance County. The scope for these improvements were not complete by the time of the Request for Cultural Resources Review submittal, but a study area incorporating approximately 116.52 acres (47.154 hectares) was proposed for the purposes of the cultural resources review. This area was largely composed of a study corridor 400 feet (nearly 122 meters) wide over a 6000-foot (1828.8-meter) long section of I-85/I-40 and another corridor 600 feet (nearly 183 meters) wide from the SR 1007 intersection with NC 119 to a point 2500 feet (762 meters) south of I-85/I-40.

### SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: *SURVEY REQUIRED*

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

A review of the site maps and files archived at the North Carolina Office of State Archaeology was conducted on June 1, 2015. No previously identified archaeological resources are located within the proposed APE. Though much of the proposed APE has clearly been subjected to significant alterations of the landscape as a result of the construction of transportation facilities and commercial development, a few areas appear to be less disturbed. These areas appear to fall in portions of the landscape that exhibit landforms and soil types that may possess archaeological deposits. A reconnaissance investigation to determine the archaeological potential of these areas is recommended.

### SUPPORT DOCUMENTATION

See attached:  Map(s)  Previous Survey Info  Photos  Correspondence  
 Other: NRCS web soil survey information (<http://websoilsurvey.nrcs.usda.gov/app/>)

### FINDING BY NCDOT ARCHAEOLOGIST – *SURVEY REQUIRED*

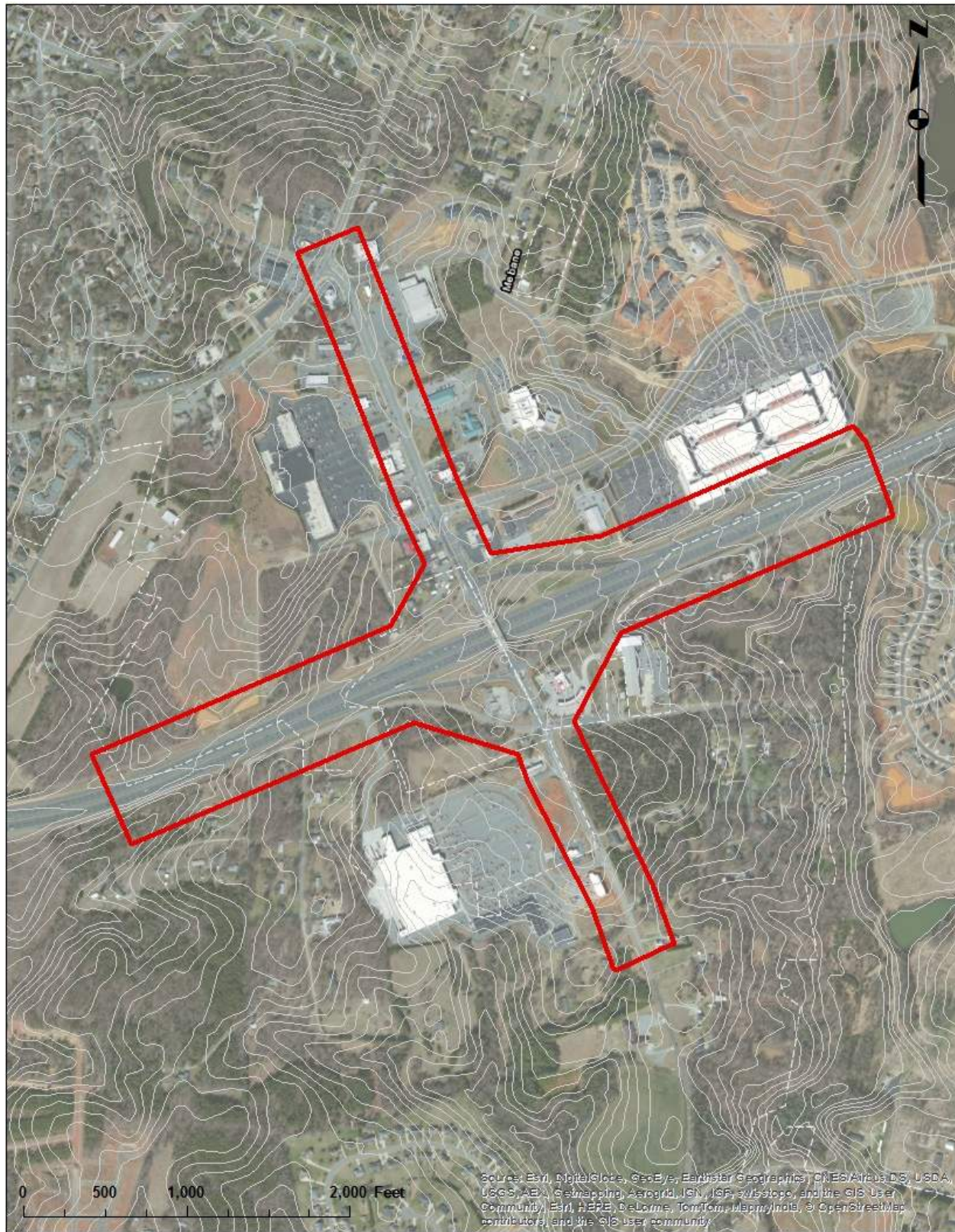
June 5, 2015

NCDOT ARCHAEOLOGIST

Date

---

 Proposed fieldwork completion date



Aerial photograph of the I-85/I-40 interchange with SR 1007 illustrating the proposed APE (in red) with 2-foot contours.



15-04-0035



## HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED 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-5711	<b>County:</b>	Alamance
<b>WBS No.:</b>	50401.1.FS1	<b>Document Type:</b>	CE
<b>Fed. Aid No:</b>	NHPP-040-4(161)220	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Permit Type(s):</b>	
<b><u>Project Description:</u></b> Interchange improvements at I-85/I-40 at SR 1007 (Mebane Oaks Rd)			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

**Date of field visit:** June 2015

#### **Description of review activities, results, and conclusions:**

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on May 6, 2015. Based on this review there are no NR, DE, LL, or SL in the project area. There was one identified historic site, the Arrowhead Inn Motel (AM1619), which was evaluated for National Register eligibility in a report delivered to NCHPO in November 2015. A letter dated December 17, 2015 states that NCHPO concurs with the recommendation of NCDOT that the Arrowhead Inn Motel is not eligible for the National Register. No other historic properties are present in the APE. No historic properties will be affected by this project.

### SUPPORT DOCUMENTATION

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

**FINDING BY NCDOT ARCHITECTURAL HISTORIAN**

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OR AFFECTED**

Shelby Reap  
NCDOT Architectural Historian

Dec 28, 2015

Date



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

Ramona M. Bartos, Administrator

Governor Pat McCrory  
Secretary Susan Kluttz

Office of Archives and History  
Deputy Secretary Kevin Cherry

December 17, 2015

MEMORANDUM

TO: Shelby Reap  
Office of Human Environment  
NCDOT Division of Highways

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

SUBJECT: Historic Structures Survey Report for Interchange Improvements for I-85/I-40 at  
SR 1007, I-5711, PA 15-04-0035, Alamance County, ER 15-2679

Thank you for your letter of November 24, 2015, submitting the Historic Structures Survey Report for the above-referenced undertaking. We have reviewed the report and concur that the **Arrowhead Inn Motel (AM1619) is not eligible** for listing in the National Register of Historic Places.

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.

cc: Mary Pope Furr, NCDOT, [mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)  
Jessica Dockery, Alamance HPP, [Jessica.Dockery@alamance-nc.com](mailto:Jessica.Dockery@alamance-nc.com)

**FINDING BY NCDOT ARCHITECTURAL HISTORIAN**

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OR AFFECTED**

Shelby Reap  
NCDOT Architectural Historian

Dec 28, 2015  
Date



**NO NATIONAL REGISTER OF HISTORIC PLACES  
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES  
PRESENT 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-5711** *County:* **Alamance**  
*WBS No:* **50401.1.FS1** *Document:* **CE**  
*F.A. No:* **NHPP-040-4(161)220** *Funding:*  State  Federal  
*Federal Permit Required?*  Yes  No *Permit Type:* **na**

#### ***Project Description:***

The North Carolina Department of Transportation (NCDOT) intends to improve the interchange at I-85/I-40 and SR 1007, Mebane Oaks Road in Alamance County. At the present time, two alternatives for this project are currently under consideration. Both of these alternatives focus in the interchange for I-85 and I-40 at SR 1007 and stretch from Arrowhead Boulevard/Cameron Lane at the north end to a point south of the Walmart Supercenter on Mebane Oaks Road. The combined footprint of these two alternatives encompasses an area of 29.9 acres (slightly over 12.1 hectares). For the purposes of the consideration of archaeological impacts, this combined footprint is the revised area of potential effects (APE).

### SUMMARY OF ARCHAEOLOGICAL FINDINGS

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

At the time of the initial request for archaeological input, the scope for these improvements was not complete, but a study area incorporating approximately 116.52 acres (47.154 hectares) was proposed for the purposes of the cultural resources review. This area was largely composed of a study corridor 400 feet (nearly 122 meters) wide over a 6000-foot (1828.8-meter) long section of I-85/I-40 and another corridor 600 feet (nearly 183 meters) wide from the SR 1007 intersection with NC 119 to a point 2500 feet (762 meters) south of I-85/I-40. This area was considered to be the APE for the purposes of the archaeological survey. Thus, the initial APE for the project encompassed an area of 116 acres (over 46.94 hectares). As noted on the original Archaeological Survey Required form (dated June 5, 2015), much of that initial APE had been significantly altered as a result of the construction of transportation facilities and commercial development; but, no previous archaeological investigations appeared to have been conducted in the area and a few portions of that original APE appeared to be less disturbed than others.

On April 15, 2016, an archaeological reconnaissance and targeted subsurface testing was initiated by NCDOT archaeologists, Shane Petersen and Brian Overton. The entire original APE was visually inspected and most of the areas within the project area were determined to have been altered beyond a reasonable expectation of identifying significant archaeological resources. The sole exception was a portion of the original APE towards the western end of the project area along the north side of I-84/I-40. This area appeared to have been the edges of toe-slopes overlooking an unnamed tributary of Little Haw Creek that had been cut off by the highway facility. Immediately to the east of this wooded area a large commercial/residential construction project had cleared a large portion of the APE. Four subsurface tests were excavated in this wooded area revealing soil profiles that were fairly consistent with the description of Georgeville silt loam. One shovel test pit (STP No. 1) produced a very small collection of three flakes.

Further to the west (roughly 275 feet from STP No. 1) what appeared to be a small spring box was observed at the northern edge of the original APE. PVC pipes led off to the west towards residential properties outside the area of our concern.

The small assemblage of debitage was recorded as Site No. 31AN412. Two of the flakes were identified as heavily weathered phytic lava or crystal tuff. The parent material was clearly felsic, but further identification was hampered by the small size of the samples and the heavy weathering of the flake surfaces. One of these flakes was identified as a primary decortication flake (cortex on the striking platform) and the other was identified as a tertiary flake. The third artifact was identified as a quartz flake fragment.

The described below, the scale of the proposed project changed before radial testing and a final evaluation of 31AN412 could be completed; although the site, at present, does not appear to be archaeologically significant. Nevertheless, the site should remain (for now) unevaluated.

On July 17, 2017, two sets of new design alternatives for the proposed improvements to the interchange were presented for archaeological review. These two sets of plans were combined into the new 29.9-acre archaeological APE described above. For the most part, the current APE falls within the area covered by the original APE. The exception is a roughly 3-acre section of secondary-growth woodland south of SR 2210. This area was generally covered by the April reconnaissance inspection and falls within an area mapped as containing eroded soils. Nothing in the new APE suggests the possibility of significant archaeological resources being present.

No further archaeological investigations are required for the project as currently proposed. The project within the new APE should be considered to be compliant with Section 106 of the National Historic Preservation Act and North Carolina General Statute 121-12(a). Should the project change to include a larger footprint than covered by the current APE, further consultation will be necessary. In the unlikely event that archaeological remains are encountered during the bridge replacement, work should cease in that area and the NCDOT Archaeology Group should be notified immediately.

Shovel Test Results:

Shovel Test Pit	Level	Depth (top)	Depth (base)	Munsell	Color	Soil Texture	Artifacts	Notes
1	I	0	2	5YR4/2	Dark reddish gray	Loam	no	Humic layer
	II	2	10	5YR5/8	Yellowish red	Silt loam	lithics	
	III	10	25	5YR4/6	Yellowish red	Silt clay loam	no	
2	I	0	7	5YR4/2	Dark reddish gray	Loam	no	Humic layer
	II	7	14	5YR5/8	Yellowish red	Silt loam	no	
	III	14	29	5YR4/6	Yellowish red	Silt clay loam	no	
3	I	0	6	5YR4/2	Dark reddish gray	Loam	no	Humic layer
	II	6	22	7.5YR6/6	Reddish yellow	Silt loam	no	
	III	22	30	7.5YR5/8	Strong brown	Silt clay loam	no	
4	I	0	13	7.5YR5/3	Brown	Silt loam	no	Wet.
	II	13	26	7.5YR7/4 mottled with 7.5YR 7/8	Pink mottled with reddish yellow	Silt loam	no	Wet.



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

- There are no National Register listed or eligible ARCHAEOLOGICAL SITES present within the project's area of potential effects.** (Attach any notes or documents as needed)
- No subsurface archaeological investigations were 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.**
- 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.

#### SUPPORT DOCUMENTATION

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence

Signed:



August 25, 2017

NCDOT ARCHAEOLOGIST

Date







Aerial photograph of subsurface testing (yellow) and the location of site 31AM412 (pink) within the original APE for the proposed improvements to the interchange (red lines).

Artifact Inventory for Site No. 31AN412:

Shovel Test Pit No. 1, Zone I 2017.0562

- 1 Primary decortication flake, felsic phyric lava or crystal tuff
- 1 Tertiary flake (interior), felsic phyric lava or crystal tuff
- 1 Flake fragment, quartz





View of the location of Site No. 31AM412 north of I-85/I-40 facing north.



View of “spring-box” at the northern edge of the original APE (facing west).

# EIS RELOCATION REPORT

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

E.I.S.       CORRIDOR       DESIGN

WBS ELEMENT:	50401.1.FS1	COUNTY	Alamance	Alternate	1	of	1	Alternate
T.I.P. No.:	I-5711							
DESCRIPTION OF PROJECT:	I-85/I-40 Interchange Improvements at Mebane Oaks Road							

ESTIMATED DISPLACES					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	0	0	0	0	-	-	-	-	-
Businesses	1	0	1	1	VALUE OF DWELLING		DSS DWELLING AVAILABLE		
Farms	0	0	0	0	Owners	Tenants	For Sale		For Rent
Non-Profit	0	0	0	0	0-20M	\$ 0-150	0-20M	\$ 0-150	

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
X		1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
	X	6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
	X	8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <b>12 months</b>

REMARKS (Respond by number)	
	<p>#1. Relcaotion services will be needed for the BP Gas Station.</p> <p>#3. Business services will still be available after the project.</p> <p>#4. BP Gas Station located at 1121 mebane Oaks Road Mebane, NC, lot size is approximately 2 acres, 17 employees, building and approximately 400 sqft. in size. Minority owned business.</p> <p>#6. Research for available housing was not necessary as there will be no residential displacees as a result of this project.</p> <p>#11. Yes, as of today, public housing is available; however there will be no residential displaces.</p> <p>#12. There will be no residential displacees as a result of this project; however as of today adequate DSS Housing is available.</p> <p>#14. Yes, suitable business sites are available according to the major commercial real estate search engine. LoopNet.</p> <p>#15. Relocation for this project should take approximately 12 months.</p>

<p>Tiara McCray Right of Way Agent</p>	<p>07/25/2017</p> <p>Date</p>	<p>Relocation Coordinator</p>	<p>7/28/17</p> <p>Date</p>
--------------------------------------------	-------------------------------	-------------------------------	----------------------------