

## Type III Categorical Exclusion Action

STIP Project No.	<b>I-5880</b>
WBS Element	<b>53080.1.1</b>
Federal Project No.	<b>N/A</b>

### **A. Project Description**

The North Carolina Department of Transportation (NCDOT), in consultation with the Federal Highway Administration (FHWA), proposes interchange modifications on I-40/US 311 at SR 2747 (Clemmons Road) and NC 109 (Thomasville Road) in Winston-Salem, Forsyth County (see **Figure 1**). The NC route designation for NC 109 extends south from I-40/US 311; therefore, for clarity, NC 109 will be referred to as Thomasville Road for the remainder of this document. The project is identified as I-5880 in the 2018-2027 State Transportation Improvement Program (STIP). The proposed improvements are funded through the North Carolina State Highway Trust Fund (State Funded). A change in Interstate Access Request (IAR) from the Federal Highway Administration (FHWA) will be required for the project, which classifies the proposed improvements as a federal action.

Project I-5880 proposes to convert the existing half diamond interchanges at I-40/US 311 and NC 109 (Thomasville Road) to a full interchange configuration at NC 109 (Thomasville Road) and the removal of connector roads and the half diamond interchange at SR 2747 (Clemmons Road).

Currently, the two partial diamond interchanges at Clemmons Road and Thomasville Road function as one full diamond interchange. An eastbound off-ramp and a westbound on-ramp are located at Clemmons Road while an eastbound on-ramp and a westbound off-ramp are located at Thomasville Road. The two partial interchanges are connected by a pair of two-lane, one-way service roads paralleling I-40/US 311 (one on each side). South Frontage Road is one way in the eastbound direction, and North Frontage Road is one way in the westbound direction. STIP Project I-5880 proposes to remove the partial interchange at Clemmons Road and the one-way service roads, and convert the partial interchange at Thomasville Road to a full interchange.

Thomasville Road is a principal arterial south of I-40/US 311 and a major collector north of the interstate. Clemmons Road is designated as a local roadway. I-40/US 311 provides network connections to US 52/NC 8 and I-74 just west and east of the project study area (see **Figure 1**), respectively. The project is located within the City of Winston-Salem municipal boundaries in Forsyth County.

Topography in the project vicinity is comprised of gently rolling hills with narrow, level floodplains along streams. Elevations in the study area range from 802 to 934 ft. above sea level. The project area consists of varied land uses, including urban residential areas interspersed with small pockets of forestland, industrial, institutional, and commercial.

The proposed project is identified as a fiscally constrained project in the Winston-Salem Urban Area Metropolitan Planning Organization (WSUAMPO) *2040 Metropolitan Transportation Plan* (MTP).

### **B. Description of Purpose and Need**

#### **Purpose of Project**

The purpose of the proposed project I-5880 is to combine the partial interchanges at SR 2747 (Clemmons Road)/I-40 and NC 109 (Thomasville Road)/I-40 by removal of the partial interchange and connector roads at SR 2747 (Clemmons Road) and reconfiguring the NC 109 (Thomasville Road) partial interchange to better accommodate forecasted levels of congestion at

the interchange and improve traffic operations to an acceptable level of service through 2040. Another desirable outcome of the proposed project is to improve traffic safety within the project study area.

### Need for Project

The proposed improvements are needed to improve levels of service and operational efficiency at the interchange, adjacent intersections, and along I-40 in the project study area.

Additionally, the proposed improvements are needed to improve safety and vehicle crash rates on I-40, SR (2747) Clemmons Road, and NC 109 (Thomasville Road) in the project study area.

*The Traffic Capacity Report and Interchange Modification Report<sup>1</sup>, NCDOT STIP I-5880, Interchange Modification at I-40 and NC 109 (Thomasville Road) (November 2018) (Traffic Capacity Report) concluded that base-year (2017) Highway Capacity Software (HCS) level of service (LOS) estimates indicate that most weaving segments along I-40 do not operate at acceptable levels of service during the AM and PM peak hours. Based on TransModeler level of service analysis, I-40 Eastbound segments operate at an LOS D or worse in the Base Year (2017). Other intersections in the project study area operate at acceptable levels of service during the AM and PM peak hours in the Base Year (2017).*

The Traffic Capacity Report concluded that the design year (2040) No Build HCS LOS indicate that weaving segments along eastbound I-40 do not operate at acceptable levels of service. Select HCS LOS along westbound I-40 do not operate at acceptable LOS in the AM and PM peak hours. Based on the Transmodeler freeway LOS results, one segment of I-40 eastbound operates at LOS F in the AM peak hour, and two segments of I-40 westbound operate at LOS F during the PM peak hour. All study intersections operate an unacceptable levels of service during peak hours, with the exception of SR 2747 (Clemmons Road) at Old Lexington Road, which operates at LOS B and LOS D during the AM and PM hours, respectively.

NCDOT currently has several projects programmed on the STIP and within the WSUAMPO MTP that directly influence traffic on the I-40/Thomasville Road interchange. The Design Year (2040) scenarios assume that all other fiscally constrained projects identified in the WSUAMPO MTP expected to be completed by 2040 are constructed. The traffic projections to 2040 show that many of the existing intersections in the study area will be over capacity unless some improvement is made.

Five year crash data (2013-2018) was obtained from the NCDOT Traffic Engineering Accident Analysis System (TEAAS) database for study area sections of I-40, SR 2747 (Clemmons Road) and NC 109 (Thomasville Road). Crashes recorded between July 2013 and June 2018 were compiled and analyzed.

A total of 914 crashes were found to have occurred along I-40 within the study area. There were two recorded fatalities during this same time period. Injuries occurred in 22.8% of the total crashes. The majority of recorded crashes were classified as rear-end collisions (30.2%) and sideswipe collisions (23.6%). Crashes per 100 Million Vehicle Miles (MVM) recorded during the period on I-

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<sup>1</sup> Available in the NCDOT project files, located on NCDOT's Sharepoint site at: [https://connect.ncdot.gov/site/Preconstruction/division/div09/I-5880/Congestion%20Management/I-5880%20Traffic%20Capacity%20Analysis\\_Final.pdf](https://connect.ncdot.gov/site/Preconstruction/division/div09/I-5880/Congestion%20Management/I-5880%20Traffic%20Capacity%20Analysis_Final.pdf)

40 (138.75) exceeded both the Statewide Crash Rate<sup>2</sup> (129.56) and the Critical Crash Rate<sup>3</sup> (136.93) for North Carolina.

118 total crashes were found to have occurred along SR 2747 (Clemmonsville Road) within the study area. There was one recorded fatality during this same time period. Injuries occurred in 44.1% of the total crashes. The majority of recorded crashes were classified as angle collisions (46%) and rear-end collisions (22%). Crashes per 100 Million Vehicle Miles (MVM) recorded during the period on SR 2747 (Clemmonsville Road) (844.07) exceeded both the Statewide Crash Rate<sup>4</sup> (519.68) and the Critical Crash Rate<sup>3</sup> (623.55) for North Carolina.

Along NC 109 (Thomasville Road), 118 total crashes were recorded within the study area. There were no recorded fatalities during this same time period. Injuries occurred in 44.9% of the total crashes. The majority of recorded crashes were classified as angle collisions (47%), rear end collisions (25%) and left turn accidents (21%). Crashes per 100 Million Vehicle Miles (MVM) recorded during the period on NC 109 (Thomasville Road) (867.18) exceeded both the Statewide Crash Rate<sup>4</sup> (561.01) and the Critical Crash Rate<sup>3</sup> (670.30) for North Carolina.

Improving traffic operations and efficiency on the secondary roads in the study area and improving available traffic weaving distances on I-40 should improve overall traffic safety in the area.

### **C. Categorical Exclusion Action Classification**

The proposed project is classified as Type III for purposes of preparing the CE.

### **D. Proposed Improvements**

The following paragraphs describe the No Build Alternative and the three Build Alternatives considered for the proposed action and presented to the public, and the identification of the Preferred Alternative. Additionally, this section describes other alternatives that were considered, but screened out in advance of design level studies for various reasons.

#### **No Build Alternative**

A No Build Alternative is an alternative for which no physical improvements to the existing roadway or construction of a new facility is proposed. The No Build Alternative for this project does not meet the transportation goals of the NCDOT and WSUAMPO, fails to provide solutions to anticipated high traffic volumes in the area, and does not satisfy the purpose and need for action. For these reasons, NCDOT does not consider the No Build Alternative as the Preferred Alternative for this project. The No Build Alternative does, however, provide a basis for comparing the benefits and adverse impacts of the Build Alternatives, thus, the No Build Alternative is included in this CE.

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<sup>2</sup> 2015-2017 statewide crash rate for Urban Interstate Routes in North Carolina.

<sup>3</sup> Based on the statewide crash rate (95% level of confidence).

<sup>4</sup> 2015-2017 statewide crash rate for full control of access 4 lane undivided Secondary Routes in NC

### Build Alternatives Considered

All of the alternatives considered contained the following features in common:

- Closure and removal of the ramps at the I-40 and SR 2747 (Clemmonsville Road) interchange
- Widening of Bridge No. 340 carrying I-40 across SR 2747 (Clemmonsville Road) to a width of approximately 157 feet to accommodate the proposed ramps and acceleration/deceleration lanes.
- A Roundabout at the NC 109 (Thomasville Road) and SR 2747 (Clemmonsville Road) intersection.
- Two northbound through lanes on NC 109 (Thomasville Road) through the interchange with I-40.
- A free flow right turn lane from I-40 East to south bound NC 109 (Thomasville Road).

### Alternative 1

In addition to the common features listed above, Alternative 1 included dual left turns towards I-40 west from NC 109 (Thomasville Road), dual through lanes on northbound NC 109 (Thomasville Road) through the interchange (one through lane drops north of the interchange), and free flow right turn lane from southbound NC 109 (Thomasville Road) onto I-40 West. Additionally, a single southbound through lane on NC 109 (Thomasville Road) was proposed through the interchange with I-40, as well as a single left turn lane onto I-40 East. was also included. No widening of Bridge No. 29 on NC 109 (Thomasville Road) is proposed under Alternative 1.

### Alternative 2

All of the common features listed above are included in Alternative 2. At the proposed reconfigured I-40/NC 109 (Thomasville Road) interchange, Alternative 2 proposes two 12-foot travel lanes northbound on NC 109 (Thomasville Road) through the interchange, two 12-foot left turn lanes from northbound NC 109 (Thomasville Road) to westbound I-40, and two 12-foot travel lanes south bound through the interchange on NC 109 (Thomasville Road), as well as dual left turn lanes onto I-40 East. Bridge No. 29 on NC 109 (Thomasville Road) will be widened to approximately 90 feet to accommodate the reconfigured travel and turn lanes through the interchange Alternative 2 is further described in Section E and shown on **Figure 2**.

### Alternative 3

In addition to the common features listed above, Alternative 3 included the reconfiguration of the NC 109 (Thomasville Road)/I-40 Interchange with roundabouts at ramp terminals of the interchange at I-40 and NC 109 (Thomasville Road), two northbound through lanes on NC 109 (Thomasville Road) through the interchange with I-40 (both lanes may exit to westbound I-40, the outside lane may also continue northbound). Additionally, two southbound through lanes on NC 109 (Thomasville Road) through the interchange with I-40, with one lane exiting the roundabout southbound, the other to eastbound I-40.

### Preferred Alternative

The placement and configuration proposed under Alternative 2 is superior operationally, with better expected LOS on I-40 and NC 109 (Thomasville Road) to the other alternatives studied, as well as an improvement to the existing split diamond frontage road, closely spaced paired interchange layout.

Alternative 2 has a lower estimated total cost, including a lower construction and right of way cost when compared to the studied build Alternatives 1 and 3. Additionally, Alternative 2 affects 22 fewer parcels than Alternative 1 and 25 fewer parcels than Alternative 3. Alternative 2 has one less residential relocation (1) than Alternative 1.

Of those commenting at and after the public meeting on the Alternatives, the largest number of respondents indicated a preference for Alternative 2.

The single diamond interchange at I-40 and NC 109 (Thomasville Road) will improve travel and reliability for the traveling public (commuters and through traffic) and the significant commercial trucking and freight shipments that pass through this interchange area between US 52 and I-74 along I-40.

These improvements led to NCDOT's identification of the Alternative 2 as the Preferred Alternative.

#### Other STIP Projects in the Area

NCDOT has prioritized several other STIP projects in the area. **Table 1** summarizes the area projects.

**Table 1. Other Anticipated Highway Projects**

STIP No.	Road/Facility	From	To	ROW Scheduled	Construction Scheduled
I-5766	I-40	East of NC 150	NC 109	--	Under construction
I-5795	I-40	Hanes Mill Boulevard	NC 150	--	2020
	I-40	Clemmons Road	Guilford County Line		
I-5988	I-40	US 52/US 311/NC 8 Interchange		2024	2026
U-2826	US 52	Clemmons Road	Future I-74 (Winston-Salem Northern Beltway)	2025	Post 2027
B-5950	Bridge No.7	Silas Creek Parkway Bridge over Salem Creek		2026	2027
B-5770	Bridge No. 243	Salisbury Road Bridge over NC 150		2019	2020
U-2827B	I-40 Business	Fourth Street	Church Street	In progress –Design/Build	

### **E. Special Project Information for the Preferred Alternative**

This section summarizes the proposed improvements associated with the Build Alternative 2, the Preferred Alternative.

#### **Proposed Improvements**

##### Design Speed

The design speed is 40-70 mph.

##### Typical Section

I-40: 8-lane median divided, 20 foot median, 10 foot paved shoulders.

Thomasville Road at interchange: 6-lane undivided, 2 12-foot through lanes southbound, 2 12-foot through lanes northbound, dual 12-foot left turn lanes on to eastbound and westbound I-40.

##### Right-of-Way and Access Control

The Preferred Alternative involves minor widening the existing right of way laterally on both sides of portions of SR 2747 (Clemmons Road) and NC 109 (Thomasville Road). The existing right of way along these facilities varies from 75 to 100 feet; the proposed is up to 120 feet. The acquisition is anticipated to result in minimal adverse effects on adjacent properties. Partial control of access is proposed with full control along the interstate ramps and at the proposed roundabout at the intersection of SR 2747 (Clemmons Road) and NC 109 (Thomasville Road).

##### Speed Limit and Traffic Signals

Existing posted speed limit varies from 35 miles per hour (mph) on NC 109 (Thomasville Road) and SR 2747 (Clemmons Road) to 65 mph on I-40. Posted speed for the build scenario will remain the same with 35 mph on Thomasville Road/Clemmons Road and 65 mph on I-40.

The two existing traffic signals on NC 109 (Thomasville Road) at the intersections with the I-40 on and off ramps will remain and be upgraded for the build scenario. The existing signal at the SR 2747 (Clemmons Road)/NC 109 (Thomasville Road) will be removed and replaced by a roundabout.

### Anticipated Design Exceptions

There are no design exceptions anticipated at this stage of planning and design.

### Bicycle and Pedestrian Facilities/Greenways

Within the study area are intermittent, unconnected sections of sidewalk. Sidewalks are located along the west side of NC 109 (Thomasville Road) throughout the proposed construction area, on both sides of SR 2747 (Clemmons Road) throughout the proposed construction area.

Pedestrian and bicycle accommodations will be coordinated with the City of Winston-Salem during final design. In accordance with [NCDOT Pedestrian Policy Guidelines](#), NCDOT will bear the full cost to replace existing sidewalks to be relocated by the project along existing streets. The City of Winston-Salem will participate in the cost of new sidewalks where they do not currently exist. A municipal agreement will be prepared prior to project construction. The type and location of pedestrian crossings will be coordinated and determined with the City of Winston-Salem during final design.

### Forecasted Traffic Volumes (2040)

I-40: 129,900- 139,800 vpd  
Thomasville Road: 14,300 -27,200 vpd

## **Project Impacts**

### Relocations

Minor right of way impacts are expected as the improvements will be primarily on existing right of way. It is estimated that one (1) residence and one (1) business are expected to be relocated. However, this is a not a significant number of relocations when compared to the overall number of residences and businesses in the area. Relocations are summarized in Table 2.

### Noise Barriers

A Design Noise Report (DNR) will be completed on this project subsequent to this document. The DNR will determine if noise barriers are reasonable and feasible on the project.

### Water Resources

Water resources in the study area are part of the Yadkin River Basin (U.S. Geological Survey [USGS] Hydrologic Unit 03040101). The location of these water resources is shown on **Figure 3** and described below.

### Streams

Eight (8) jurisdictional streams were identified in the study area. US Army Corps of Engineers (USACE) and NC Division of Water Resources (NCDWR) stream delineation forms are available in the NCDOT project files and at NCDOT's SharePoint site. There are no buffer rules in effect for the Yadkin River Basin.

### Wetlands

Three (3) jurisdictional wetlands were identified within the study area (**Figure 3**). USACE wetland delineation forms and NC Wetland Assessment Method (NCWAM) wetland rating forms for each site are included in the NCDOT project files.

There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. There are no waters identified by the North Carolina Wildlife Resources Commission (NCWRC) as trout waters present in the study area. There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. Fiddler's Creek does not appear on the North Carolina 2016 Final 303(d) list of impaired waters.

#### Clean Water Act Permits

No Section 401 or 404 Clean Water Act permits are anticipated on this project. The proposed action is not anticipated to impact any jurisdictional features identifies in the study area. Jurisdictional impacts are summarized in Table 2.

#### Hazardous Materials

The *GeoEnvironmental Report for Planning - Conversion and Removal of NC 109 & I-40 Interchange Diamonds at Clemmons Road in Winston-Salem, Forsyth County, North Carolina* identified nine sites of potential environmental concern within the Project Study Area. Seven of the sites are considered low risk and two of the sites are considered moderate risk. One of the sites may be potentially impacted by the proposed project. Item 15 in Section G summarizes the nine sites of potential environmental concern and Geoenvironmental impacts are presented on Table 2.

#### Cultural Resources

NCDOT performed a survey of the project study area and reported one historic architecture resource within the Area of Potential Effects – The Waughtown-Belview Historic District (FY3012). An assessment of effects using design plans for the preferred alternative was performed by NCDOT, and based on that assessment, a determination of No effect to historic properties was determined.

NCDOT performed a screening of the project for archaeological resources in the study area. Based on the nature of the project and current soil conditions and land use within the Study Area, there is a low probability for prehistoric and/or historic archaeological materials to be present. Therefore, it is believed that the current Study Area is unlikely to contain intact and significant archaeological resources. A determination was reached that no archaeological survey is required for this project. Cultural Resource impacts are summarized in Table 2.

Screening, survey and effects forms for cultural resources are available in the project Sharepoint file.

**Table 2: Impact Matrix for the Preferred Alternative (Build Alternative)**

Resources	Preferred Alternative
Length (miles)	0.8
Relocations	
Residential	1
Business	1
Total	2
Hazardous Material Sites	1 - Low Risk
Jurisdictional Streams (lf)	0
Jurisdictional Wetlands (ac)	0
Federally Protected Species	
Northern long-eared bat	MANLAA(May affect, not likely to adversely affect)
Historic Architecture and Landscapes	No effect
Archaeological Resources	None
Environmental Justice and Title VI Populations	Present, not disproportionately affected
Limited English Proficiency Populations	Present, not disproportionately affected

Cost Estimate

Cost estimates for the Preferred Alternative are provided below in **Table 4**.

**Table 4: Cost Estimate**

<b>Cost Category</b>	<b>Cost</b>
Right of Way Cost	\$ 497,968
Utility Cost	\$ 1,033,771
Construction Cost	\$8,200,000
<b>Total Cost</b>	<b>\$9,731,739</b>

Public Involvement

A public meeting was held on September 25, 2018 at the First Waightown Baptist Church in Winston-Salem (838 Moravia Street). The informal, open house style meeting had 75 individuals sign in. Twenty two (22) comment forms were received either at the meeting or during the comment period, with comments ranging from questions on neighborhood impacts to travel time concerns. A Local Officials' Informational meeting was held prior to the public meeting. Handouts provided at the meeting, comment forms, and meeting summaries are available in the NCDOT Division 9 project files and at NCDOT's SharePoint site.

## F. Project Impact Criteria Checklists

**Table 5** is the Summary of Impacts for the Build Alternative (Preferred). For resource impacts identified with the checked box **Yes**, additional information is provided for those questions in Section G.

<b>Table 5. Summary of Impacts for Build Alternative (Preferred)</b>			
<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	Has Mobile Source Air Toxics (MSAT) been considered for this project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
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 checked="" type="checkbox"/>	<input 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 affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**G. Additional Documentation as Required from Section F****Checklist Item 1: Federally Protected Species**

As of March 21, 2018, the U.S. Fish and Wildlife Service (USFWS) lists three federally protected species for Forsyth County. **Table 6** provides the list of federally protected species in Forsyth County, all of which are under the jurisdiction of USFWS. The Biological Conclusion is based on field observation and survey results in the study area. One species, the Northern long-eared bat has a conclusion of MANLAA – May Affect, Not Likely to Adversely Affect.

**Table 6: USFWS Listed Species in Forsyth County**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Glyptemys muhlenbergii</i>	Bog turtle	T(S/A)	No	Not Required
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Yes	MANLAA
<i>Cardamine micranthera</i>	Small-anthered bittercress	E	Yes	No Effect

T(S/A) - Threatened due to similarity of appearance  
MANLAA – May affect, not likely to adversely affect

E – Endangered

T - Threatened

**Northern long-eared bat****Biological Conclusion:** May Affect- Not Likely to Adversely Affect

NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. Section 7 responsibilities are therefore considered fulfilled. NCDOT has also reviewed the USFWS Asheville Field Office website ([http://www.fws.gov/asheville/htmls/project\\_review/NLEB\\_in\\_WNC.html](http://www.fws.gov/asheville/htmls/project_review/NLEB_in_WNC.html)) for consistency with NCNHP records. This project is located entirely outside of the red highlighted areas (12-digit HUC) that the USFWS Asheville Field Office has determined to be representative of an area that may require consultation.

**Checklist Item 8: Mobile Source Air Toxics**

The purpose of this project is to combine the partial interchanges at SR 2747 (Clemmons Road)/I-40 and NC 109 (Thomasville Road)/I-40 by removal of the partial interchange and connector roads at SR 2747 (Clemmons Road) and reconfiguring the NC 109 (Thomasville Road) partial interchange. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the no-build alternative.

**Checklist Item 15: Hazardous Material Sites**

Nine (9) sites of potential environmental concern are identified within the study area and summarized in **Table 7**. Seven (7) of the identified sites are considered Low risk, and two (2) are considered moderate risk.

Of the nine (9) identified sites, one (1) site (Site 9 – Idols Food Store) will be potentially impacted by the proposed project. This site is located near the proposed roundabout at the intersection of SR 2747 (Clemmons Road) and NC 109 (Thomasville Road). Site 9 – Idols Food Store is considered Low Risk for monetary or scheduling impacts to impact the project. The full GeoEnvironmental Report is available in the project files on the SharePoint site.

**Table 7: Potential Hazardous Materials Sites in the Project Area**

ID	Site Address	Name	Site Usage	Potential Concern	Risk	Database Records/ Additional Information
1	3300 Lexington Road	AT&T Technologies, Inc.	Telecom	UST(s) / Current Business	Low	UST Registry/LUST
2	3145-3151 Old Lexington Road	Bean's Tire & Service	Auto Service Station	UST(s) / Current Business	Low	UST Registry/LUST
3	717 East Clemmons ville Road	Bain Oil Company, Inc.	Petroleum Distribution	UST(s) / Current Business	Low	UST Registry/LUST
4	734 East Clemmons ville Road	Easton Elementary School	School	UST(s)	Low	UST
5	3015 Old Lexington Road	Bell South	Telecom Operations	UST(s) / Current Business	Low	UST
6	500 Battery Drive	Douglas Battery MFG Co	Manufacturing	CERCLIS, SHWS, Spills, LUST	Moderate	State Listed Hazardous Site/ LUST
7	800 Robie Street	Bell REM Auto Operations	Telecom Operations	LUST, RCRA CESQG, UST	Low	UST Registry/LUST
8	2955 Starlight Drive	Historic Douglas Battery & Historic Sears, Roebuck & Co.	Redeveloped Light Industrial	Brownfields, LUST	Moderate	Brownfields/LUST
9	1035 East Clemmons ville Road	Idol's Food Store, Inc.	Gas Station/ Convenience Store	UST(s) / Current Business	Low	UST Registry/FUEL STATION

\* LAST – Leaking Above Ground Storage Tank

\*\* UST – Underground Storage Tank

\*\*\* LUST - Leaking Underground Storage Tank

#### Checklist Item 22: Access Control

In the study corridor SR 2747 (Clemmons ville Road) and NC 109 (Thomasville Road) currently have no control of access. With the Preferred Alternative both roadways will have partial control of access with full control at the proposed roundabout at the intersection of these two roads.

#### Checklist Item 28: Noise Policy

The project is considered a Type I under NCDOT's Noise Policy. The source of this traffic noise information is the project Traffic Noise Report (Traffic Noise Report, HDR, September 2019).

#### Traffic Noise Impacts

The maximum number of receptors in each project alternative predicted to become impacted by future traffic noise is shown in the table below. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels as defined in the NCDOT Traffic Noise Policy.

**Predicted Traffic Noise Impacts by Alternative\***

Traffic Noise Impacts				
Alternative	Residential (NAC B)	Places of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
Build Alternative	87	4	0	91

\*Per TNM 2.5 and in accordance with 23 CFR Part 772

Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts, including noise barriers, were considered for all impacted receptors in each alternative. Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

Noise Barriers

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. The following table summarizes the results of the evaluation.

### Preliminary Noise Barrier Evaluation Results

NSA	Noise Barrier Location	Length / Height <sup>1</sup> (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction <sup>2</sup>
NSA 1	Barrier 1E – Extension of existing wall north of I-40 westbound and existing northwest quadrant ramp from southbound Clemmons Road to westbound I-40 and west of Clemmons Road to south of Moravia Street.	315/16.699	5,260	0	0 /1,500	No <sup>3</sup>
NSA 3	Barrier 3 - North of I-40 westbound and the northeast quadrant ramp westbound I-40 to northbound Thomasville Road and east of Thomasville Road to 300 feet north of the northeast quadrant ramp.	2,205/20	44,100	13	3,392/1,500	No <sup>4</sup>
NSA 4	Barrier 4 – North of I-40 westbound and existing N Frontage Road from east of Clemmons Road to west of the northwest quadrant ramp from south bound Thomasville Road to westbound I-40.	800/20.375	16,300	11	1,483/1,500	Yes
NSA 6	Barrier 6E - Extension of existing wall south of I-40 eastbound and existing S Frontage Road to east of Clemmons Road and east of Clemmons Road to Morsinie Street.	396/16.990	6,730	1	6,370/1,500	No <sup>3</sup>
NSA 7	Barrier 7– Extension of existing barrier south of I-40 eastbound and the existing off-ramp for eastbound I-40 to Thomasville Road from the existing barrier to west of Thomasville Road and south of Thomasville Road to south of Leona Street.	1,250/18.400	23,000	7	3,286/1,500	No <sup>4</sup>

<sup>1</sup>Average wall height. Actual wall height at any given location may be higher or lower.

<sup>2</sup>The likelihood of a barrier's construction is preliminary and subject to change, pending completion of final design and the public involvement process.

<sup>3</sup>Barrier is not feasible due to an inability to achieve a minimum of 5 dB(A) of noise reduction for at least two impacted receptors.

<sup>4</sup>Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor OR Barrier is not reasonable due to an inability to achieve at least 7-dBA noise reduction for at least one benefited receptor.

A traffic noise evaluation was performed that identified one (1) noise barrier that preliminarily meet feasibility and reasonableness criteria found in the NCDOT Traffic Noise Policy. A more detailed analysis will be completed during project final design. Noise barriers preliminarily found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation was conducted in accordance with the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion (CE). NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourages its practice among planners, building officials, developers and others.

## **H. Project Commitments**

### **NC 109 (Thomasville Road)/SR 2747 (Clemmonsville Road) Interchange Conversion and Improvements Forsyth County**

February 2019

WBS Element No. 53080.1.1

STIP Project No. I-5880

#### **GeoEnvironmental Section – Impacts to Underground Storage Tanks (UST's)**

If further design indicates potential impact to UST's at Site 9 – Idols Food Store, preliminary site assessments for soil and groundwater contamination will be performed prior to right of way purchase. If contaminated soils are encountered during construction, assessment and removal will be undertaken upon discovery.

**I. Categorical Exclusion Approval**

STIP Project No.	<u>I-5880</u>
WBS Element	<u>53080.1.1</u>
Federal Project No.	<u>N/A</u>

**Prepared By:**

9/23/2019 Steven L Brown, PE  
Date Steve L. Brown, PE  
Senior Transportation Planner  
HDR Engineering, Inc. of the Carolinas

**Prepared For:**

North Carolina Department of Transportation  
Division of Highways

**Reviewed By:**

9/23/2019 Connie K. James  
Date Connie James, PE  
Division 9 Project Engineer  
North Carolina Department of Transportation

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

9/23/2019 Brett Abernathy  
Date Pat Ivey, PE Brett Abernathy  
Division 9 Engineer  
North Carolina Department of Transportation

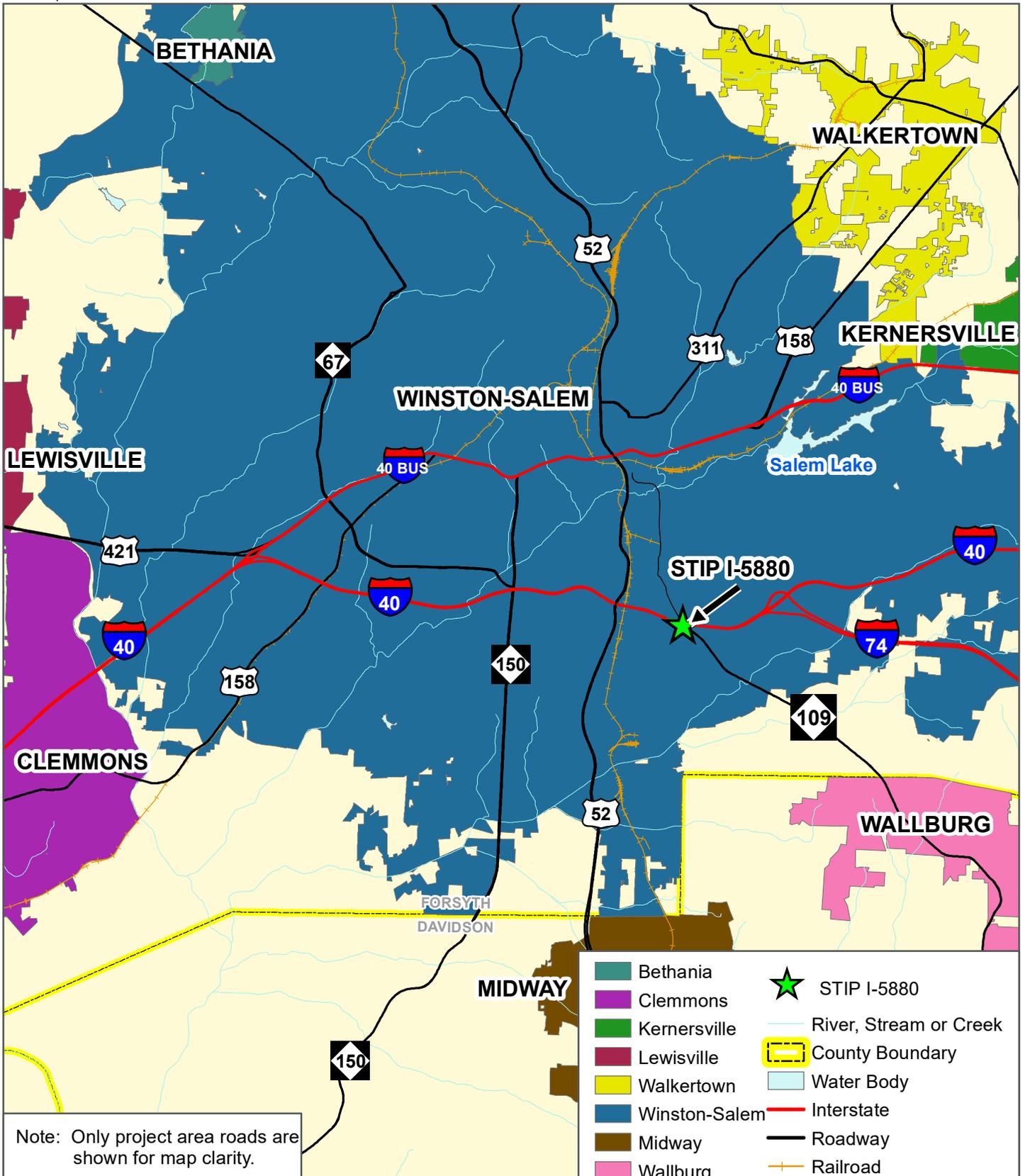
**FHWA Approval:**

9/26/2019 Joseph P. Seigle  
Date John F. Sullivan, III, PE, Division Administrator  
Federal Highway Administration

## **Additional Reports and Documentation**

The technical reports listed below, as well as additional project documentation, can be found at NCDOT's SharePoint site.

- The Traffic Capacity Report and Interchange Modification Report , NCDOT STIP I-5880, Interchange Modification at I-40 and NC 109 (Thomasville Road)
- Public Involvement Activities
- Community Characteristics Report
- Short Form Community Impact Assessment
- Natural Resources Technical Report
- Wetland and Stream Delineation Forms
- No Archaeological Survey Required Form
- No Historic Properties Present or Affected Form
- GeoEnvironmental Report for Planning - Conversion and Removal of NC 109 & I-40 Interchange Diamonds at Clemmons Road in Winston-Salem, Forsyth County, North Carolina
- Traffic Noise Report



Note: Only project area roads are shown for map clarity.

 Bethania	 STIP I-5880
 Clemmons	 River, Stream or Creek
 Kernersville	 County Boundary
 Lewisville	 Water Body
 Walkertown	 Interstate
 Winston-Salem	 Roadway
 Midway	 Railroad
 Wallburg	



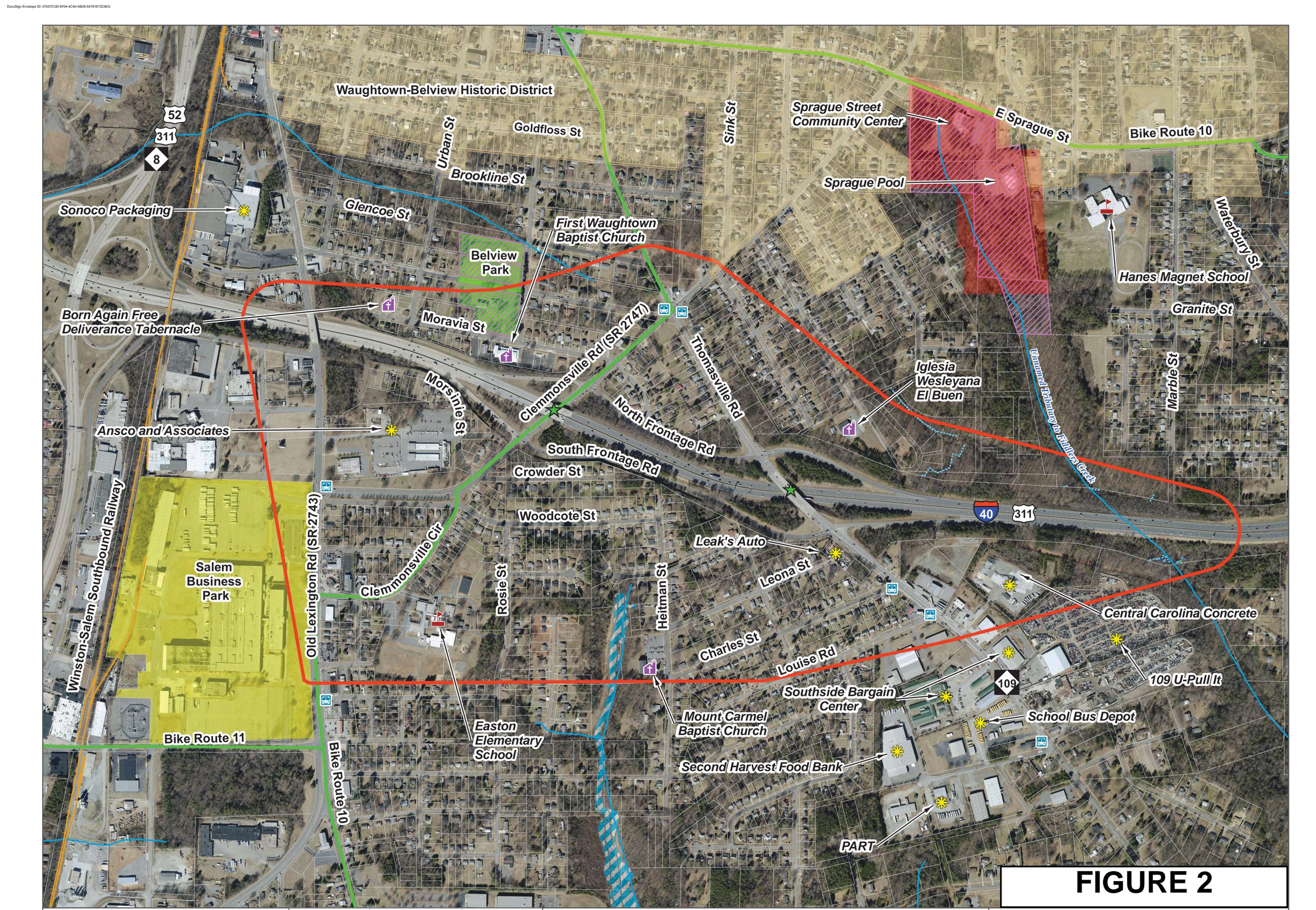
**PROJECT VICINITY MAP**

STIP I-5880  
 CONVERT INTERCHANGE AT I-40/NC109  
 TO FULL INTERCHANGE AT NC 109  
 REMOVE CONNECTOR ROADS AND  
 INTERCHANGE AT CLEMMONSVILLE ROAD  
 WINSTON SALEM, FORSYTH COUNTY



DATA SOURCES: NCDOT GIS Data, NC OneMap, City of Winston Salem

**FIGURE 1**



**FIGURE 2**

**ENVIRONMENTAL FEATURES MAP**  
**STIP I-5880, I-40/US 311**  
**CONVERSION OF INTERCHANGE AT NC 109**  
**TO FULL DIAMOND, REMOVAL OF**  
**CONNECTOR ROADS AND INTERCHANGE AT**  
**CLEMMONSVILLE ROAD IN**  
**FORSYTH COUNTY**

SEPTEMBER 2018

0 500 Feet 1,000

Surry Stokes  
 Yadkin Forsyth  
 Davie Davidson  
 Guilford

Project Location

- STIP I-5880
- Bike Route
- Study Area
- Railroad
- Jurisdictional Stream
- Salem Business Park
- Place of Worship
- River/ Stream/ Creek
- School
- Floodplain
- Notable
- Jurisdictional Wetland
- Land & Water Conservation Fund Property
- Belview Park
- Waughtown-Belview Historic District
- Parcel

**PUBLIC MEETING MAP**  
 PROJECT STIP NO. I-5880  
 FORSYTH COUNTY - WINSTON SALEM, NC  
 I-40 / US-311 AT NC-109  
 (THOMASVILLE RD / CLEMMONSVILLE RD)  
 ALTERNATIVE 2



**LEGEND**

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE AND CONSTRUCTION)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- PROPOSED ROADWAY
- PROPOSED SIDEWALK
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING ROADWAY TO BE RESURFACED
- PROPERTY LINES
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- WETLANDS
- STREAMS
- POTENTIAL IMPACT AREA
- PROPOSED CONTROL OF ACCESS
- HISTORIC DISTRICT
- POTENTIAL 4F LOCATIONS
- CHURCHES
- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL

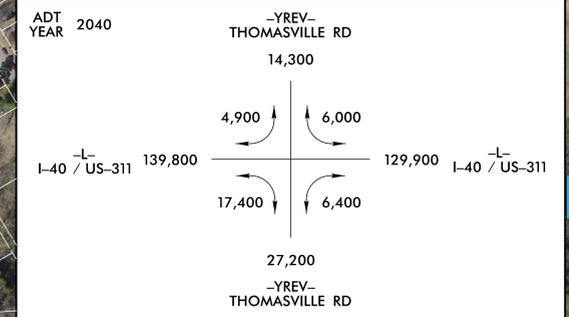
1	MORROW, WALTER E	40	RICE, BILL B	71	HERNANDEZ, MONTALBAN TRACY KAREN
2	MORROW, WALTER E	41	STARBUCK, NANCY G	72	POPILIN, GILBERT G
3	MORROW, WALTER E	42	ESSENCE, PROPERTIES NC, LLC	73	POPILIN, MARY M
4	MORROW, KAREN B	43	FOWER, MARVIN V	74	DELA, EDIBERTO RAMIREZ
5	CHORR, BELLY HEMLE	44	SALON, GUSTAVO M TRUST	75	SUMNER, GONNA M
6	ESSENTIAL PROPERTIES INC, LLC	45	MONTGOMERY, BOBBY	76	SILVA, OSCAR
7	SAM PROPERTIES OF WINSTON SALEM, LLC	46	GARCIA - JUAN LUIS	77	WILLIAMS, ARTHUR T
8	FRYAR, NORMAN J	47	GARCIA, GORJA	78	WILLIAMS, ARTHUR T
9	CON OWELL, BERTHA J	48	STARNES, ADA MAE	79	WALKER, CLYDE
10	MILLER, RICHARD	49	STARNES, ADA MAE	80	WALKER, BERRY W
11	FIRST WAGHTOWN BAPTIST CHURCH	50	STARNES, ADA MAE	81	WALLER, MELISSA E
12	MUMFORD, ROY E	51	JANUARY, LORAN K	82	JACINTO, AGUSTIN HERBERA
13	SCRIVEN, ANNIE TOWN BAPTIST CHURCH	52	CHANDHARY, SHAHID	83	RICE, PATRICIA
14	STANBACK, HUBERT	53	HOWARD, WILLIAM C	84	BLACKBURN, SHELBY S
15	LEAN, CARINA DELINE	54	BLACKWELL, ELLENA	85	SALCEDO, WIFELE D
16	SILVA, MAXIMINO MARCHE	55	DOBURN INVESTMENTS, INC	86	RODAS, HECTOR HERNANDEZ
17	OTIGERA, HERRERA MA DE JESUS	56	LITTLETON, AUSTIN STONER	87	RODAS, MARIA VILLANUEVA
18	WILEY, BARBARA C	57	GARCIA, JUAN LUIS	88	DAVID & SONS PROPERTIES, LLC
19	PEREZ, JUAN ROCHA	58	GARCIA, GORJA	89	PIEDMONT NATURAL GAS
20	SILVA, ESTEBAN BERNAL	59	SALGADO, PROPERIO	90	INC W DISTRICT OF WESLEYAN CHURCH
21	JANUARY, SHARID	60	SALGADO, SARA	91	ANDREWS, J
22	GODINE, ROSA	61	HORSH, HECTOR	92	ANDREWS, J
23	MARTIN, MARSHALL	62	HORSH, EMMA	93	ANDREWS, J
24	TWELVE STAR EXPRESS, INC	63	FAUST, E M	94	ROBINSON, JEROME
25	C W MYERS TRADING POST, INC	64	WILLIAMS, ARTHUR T	95	RODAS, MARIA VILLANUEVA
26	C W MYERS TRADING POST, INC	65	WILLIAMS, ARTHUR T	96	RODAS, MARIA VILLANUEVA
27	SAVES, GRACER LEE	66	WILLIAMS, ARTHUR T	97	RODAS, MARIA VILLANUEVA
28	SHEP, DIVENS A	67	MORAN, MELYNDA K	98	RODAS, MARIA VILLANUEVA
29	MOORE, LINDA P	68	JOHNSON, ANTHONIA M	99	RODAS, MARIA VILLANUEVA
30	MORAN, RONALD L	69	JOHNSON, JOHN EMORY	100	UNITED CHRISTIAN OUTREACH
31	MORAN, LINDA P	70	GUADRA, MIGUEL		
32	GRAHAM, DOROTHY		FLORES, MARILY MONTALVAN		
33	HOPKINS, RODSWELT				
34	MORAN, LINDA P				
35	WILLIAMS, ELLA W				
36	WILLIAMS, ELLA W				
37	WILLIAMS, ELLA W				
38	WILLIAMS, ELLA W				
39	WILLIAMS, ELLA W				

**PUBLIC MEETING MAP**  
 PROJECT STIP NO. I-5880  
 FORSYTH COUNTY - WINSTON SALEM, NC  
 I-40 / US-311 AT NC-109  
 (THOMASVILLE RD / CLEMMONSVILLE RD)  
 ALTERNATIVE 2

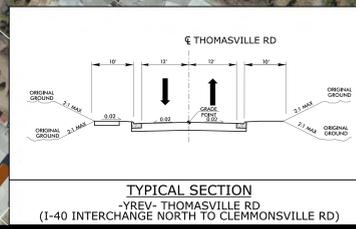
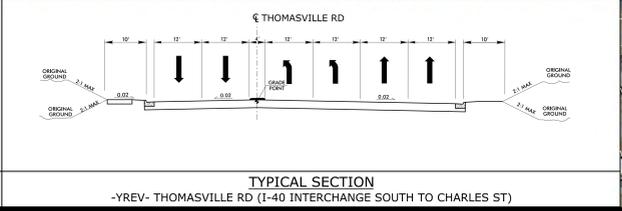
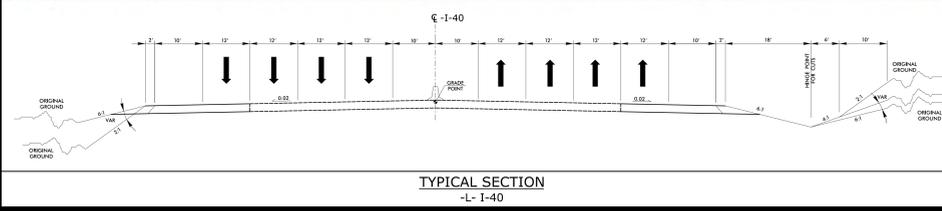


NOTE:  
 FULL CONTROL OF ACCESS IS DEFINED AS A CONNECTION TO A FACILITY PROVIDED ONLY VIA RAMPS AT INTERCHANGES.  
 ALL CROSS-STREETS ARE GRADE-SEPARATED.  
 NO PRIVATE DRIVEWAY CONNECTIONS ARE ALLOWED.

UTILITY INFORMATION:  
 TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.



101	SOUTHERN BELL TELEPHONE & TELEGRAPH COMPANY	135	MOCK, TRAVIS H
102	SOUTHERN BELL TELEPHONE & TELEGRAPH COMPANY	136	CRONIN, MICHAEL BERNARD
103	WELLS FARGO BANK, INC	137	MOCK, TRAVIS H
104	FE HOME, LLC	138	GREEN, TISHA S
105	RODMAN, JENNIFER M	139	JAMES, MERITA DENISE
106	PSI ENTERPRISE, INC	140	TIG ASSOCIATES
107	NC STATE HIGHWAY COMMISSION	141	C W MYERS TRADING POST, INC
108	LENTZ, ROSLYN BENNETT	142	NC STATE HIGHWAY COMMISSION
109	THOMPSON, JENNIFER A	143	NEUMANN, MELVIN
110	GLE CORPORATION	144	NEUMANN, BETTY C
111	NC STATE HIGHWAY COMMISSION	145	HIGH PROPERTIES, LLC
112	PLEWANG, IMO JEAN	146	C W MYERS TRADING POST, INC
113	PLEWANG, IMO JEAN	147	C W MYERS TRADING POST, INC
114	HUNTER, JONNELL TERRY	148	C W MYERS TRADING POST, INC
115	HUNTER, JONNELL TERRY	149	HERVETZ, LAWSON LARRY P
116	UNDERWOOD, RHONDA F	150	COOPER, DAVID
117	UNDERWOOD, RHONDA F	151	LEAK, JAMES A
118	DOMINGUEZ, ANTONIO	152	LEAK, BARBARA H
119	WILSON, JUDY N	153	MID-HUFF INVESTMENTS, INC
120	CARRILLO, HERNANDEZ GERARDO	154	OSBORN, DOORWAY
121	SONACTO, HERRERA YURIDIA	155	TAYLOR, BRENDA G
122	BAILEY, ROSA B	156	A T WILLIAMS OIL COMPANY
123	MARCELO, ANDALECIO BERNAL	157	WILCO HESS, LEL
124	BANDS, MAYRA RODRIGUEZ	158	A T WILLIAMS OIL COMPANY
125	PASTRANA, ELVIRA	159	PIEDMONT NATURAL GAS CO
126	SILVA, GABRIEL	160	PIEDMONT NATURAL GAS CO
127	LEAL, OSCAR	161	A T WILLIAMS OIL COMPANY
128	LEFFERES, FATE S	162	WILCO HESS, LLC
129	PALACIOS, NELSI ISRAEL	163	SEVEN W, LLC
130	BERNARD, JOSE GREGORIO		
131	DOBURN INVESTMENTS, INC		
132	DOBURN INVESTMENTS, INC		
133	DOBURN INVESTMENTS, INC		
134	CUTRELL, BETTY B		



50 25 0 25 100  
 (ENGLISH)

**DESIGN DATA**

Functional Class = Interstate  
 Design Speed = 70 mph  
 Max. Superelev. = 0.08  
 Major Collector/  
 Primary Arterial  
 Design Speed = 40 mph  
 Max. Superelev = 0.04

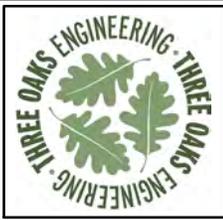
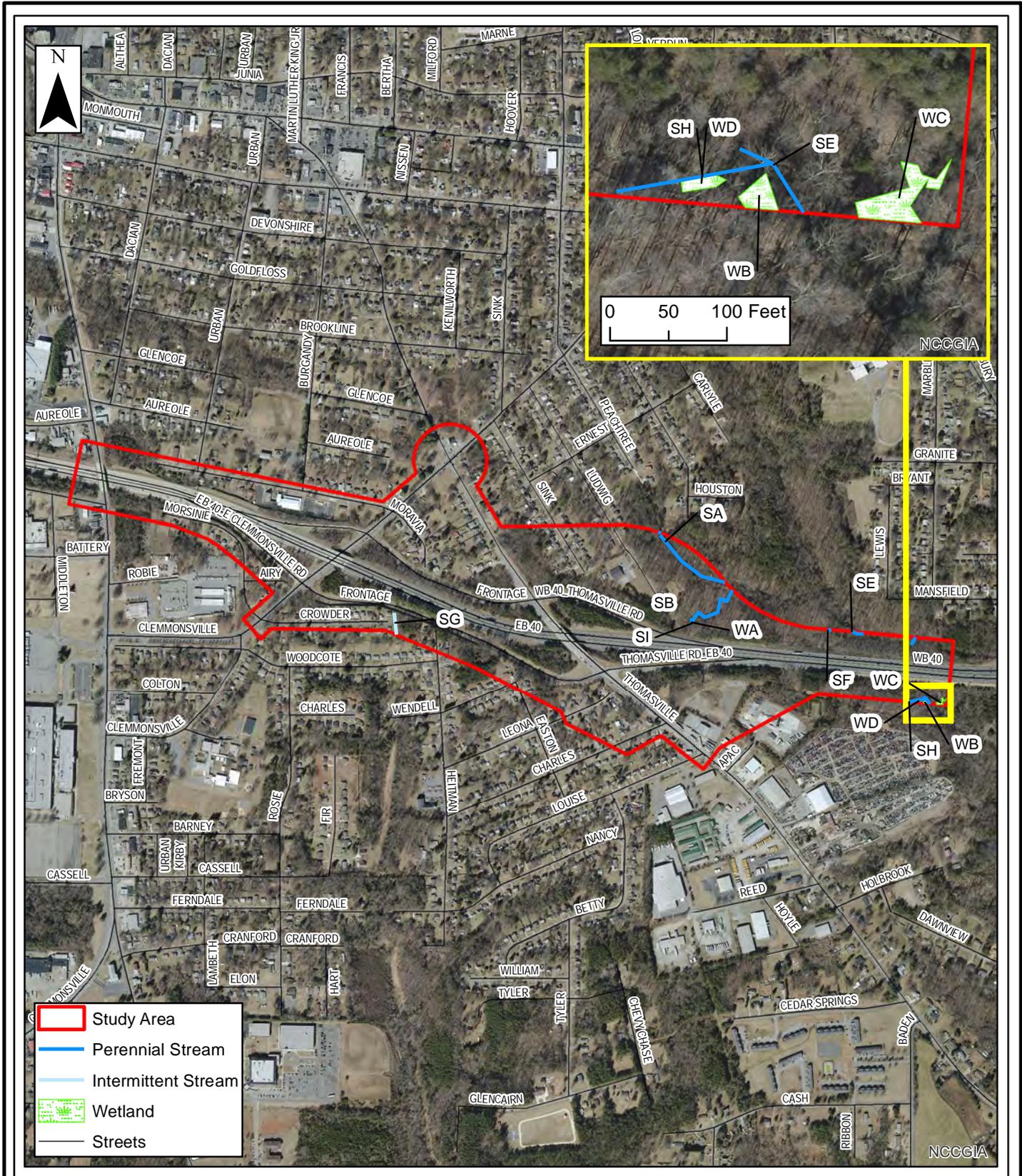
**ORTHOPHOTO DATA**  
 Imagery Date = 02-22-2014

**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION

**PUBLIC MEETING MAP**  
 PROJECT STIP NO. I-5880  
 FORSYTH COUNTY - WINSTON SALEM, NC  
 I-40 / US-311 AT NC-109  
 (THOMASVILLE RD / CLEMMONSVILLE RD)  
 ALTERNATIVE 2



**FIGURE 3**



Prepared For:  
**Interchange Improvements at I-40/  
 NC 109/SR 2747 (Clemmonsville  
 Road): TIP I-5880**  
 Jurisdictional Features  
 Forsyth County, North Carolina

Date: July 2017  
 Scale: 0 300 600 Feet  
 Job No.: 17-604  
 Drawn By: KMS Checked By: CS

Figure  
**4**

**17-07-0009****NO 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-5880** *County:* **Forsyth**  
*WBS No:* **53080.1.1** *Document:* **Federal CE**  
*F.A. No:* **Not Offered** *Funding:*  State  Federal

*Federal Permit Required?*  Yes  No *Permit Type:* **Not Specified**

***Project Description:*** NCDOT's Division 9 proposes to improve the split-diamond interchanges (Exit 195) along I-40/US 311 at NC 109 (Thomasville Road) and SR 2747 (Clemmonsville Road) by converting the half-diamond interchange at NC 109 to a full-diamond interchange and by removing connector roads and the half-diamond interchange at Clemmonsville Road in Forsyth County. Existing ROW varies between 100 feet and 140 feet whereas Proposed ROW also varies between 100 feet and 250 feet. Proposed length of the project is roughly 0.80 mile (4,224 feet). To facilitate planning purposes, a Study Area around both interchange locations has been generated. The Study Area for this project encompasses about 370.1 acres, inclusive of all existing roadways and any development.

**SUMMARY OF CULTURAL RESOURCES REVIEW*****Brief description of review activities, results of review, and conclusions:***

Review for the proposed project was accepted on Wednesday, July 19, 2017. A map review and site file search at the Office of State Archaeology (OSA) was conducted on Friday, July 21, 2017. Two (2) comprehensive archaeological surveys have been conducted within the immediate vicinity of both interchange locations for the Goldfloss Community Development Area (see Snavelly and Gorin 1975 [OSA Biblio #490]) and propose improvements along NC 109 (see Deetz et al. 2012 [OSA Biblio #3670]). Six (6) archaeological sites have been recorded within a one-mile radius of the interchange locations. Digital copies of HPO's maps (Winston Salem East Quadrangle) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpoweb/>) were reviewed on Wednesday, July 26, 2017. There are known historic architectural resources (e.g., Waughtown-Belview Historic District [FY3012]) located within or adjacent to the Study Area; however, intact archaeological deposits associated with these resources would not be anticipated within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and aerial photographs were utilized and inspected to gauge environmental factors that may have contributed to historic or prehistoric settlement within the project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding the archaeological APE.

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

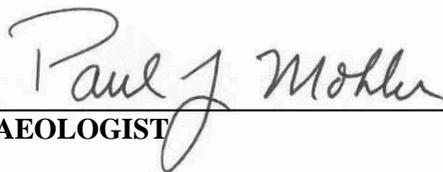
This is a Federally-funded project that may not require a Federal permit. Temporary and/or permanent easements will be necessary as well as additional ROW in certain areas. At this time, we are in compliance with NC GS 121-12a, since there are no eligible (i.e. National Register-listed) archaeological resources located within the project's Study Area that would require our attention. Based on the size and

**17-07-0009**

orientation of the Study Area, activities may take place beyond the NCDOT's existing ROW along I-40 and its connector roads around both interchange locations. From an environmental perspective, the Study Area consists of a heavily developed residential area along the I-40 corridor southeast of Winston-Salem, consists of moderately sloping topography, and is composed of various soil types, most of which are severely eroded and/or have been impacted by modern development (e.g., Pacolet-Urban land complex, 2-10% slopes [PuC], Madison clay loam, 2-6% slopes, eroded [McB2], and Pacolet clay loam, 6-10% slopes, eroded [PcC2]). Preservation of archaeological materials within these soil types is likely to be poor. Various projects in the immediate vicinity of the interchange improvements have been reviewed by the Office of State Archaeology (OSA) for environmental compliance, including residential development (ER 98-7116 and ER 99-0048) and transportation improvements (ER 88-7069 [TIP# I-900] and ER 93-8784 [TIP# R-2568]). Stating that there was a low probability for intact archaeological resources, OSA did not require an archaeological survey for the residential development projects or the expansion of I-40 in the late 1980s/early 1990s (ER 88-7069). That expansion (i.e. TIP# I-900) ran straight through both interchange locations; however, the expansion was to occur solely within the median of the highway, thus, no need for a survey to be conducted. Frankly, the construction of I-40 in the late 1970s through this section of Winston-Salem completely destroyed everything within and along the edges of the corridor. Many years later, improvements along NC 109 (ER 93-8784) required an archaeological survey because a large segment of that project was to be situated on new location (TIP# R-2568). Other transportation-related improvements within the vicinity of both interchange locations have been reviewed by the NCDOT's Archaeology Group as part of the group's Programmatic Agreement (PA) with the State Historic Preservation Office (NC-HPO). These PA-level projects include the replacement of Bridge No. 81 on Teague Road (SR 2705) (PA 11-09-0022), a multi-use path along US 421/I-40 Business (TIP# C-5620A [PA 16-03-0004]), the replacement of Bridge No. 241 on Old Salisbury Road (SR 3011) (PA 17-05-0061), and the replacement of Bridge No. 210 on Old Greensboro Road (SR 2377) (TIP# B-4509 [PA 16-01-0112]). Similar to OSA's recommendations, NCDOT's Archaeology Group did not require an archaeological survey for any of these projects based on what was being proposed. Based on the nature of the project and current soil conditions and land use within the Study Area, there is a low probability for prehistoric and/or historic archaeological materials to be present. Therefore, it is believed that the current Study Area, as depicted, is unlikely to contain intact and significant archaeological resources. No archaeological survey is required for this project. If design plans change or are made available prior to construction, then additional consultation regarding archaeology will be required. At this time, no further archaeological work is recommended. If archaeological materials are uncovered during project activities, then such resources will be dealt with according to the procedures set forth for "unanticipated discoveries," to include notification of NCDOT's Archaeology Group.

**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**

**NCDOT ARCHAEOLOGIST**

July 26, 2017

**Date**

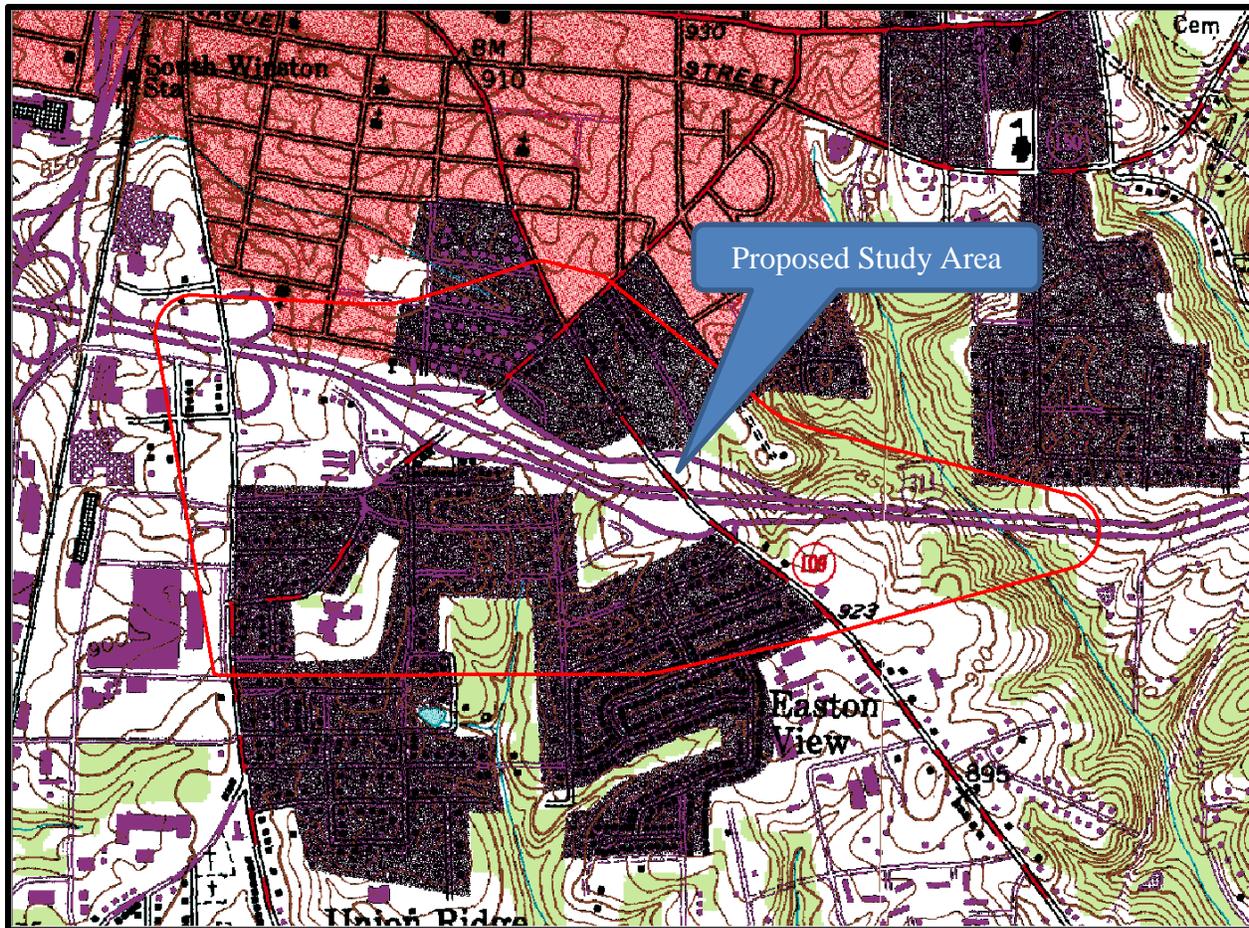
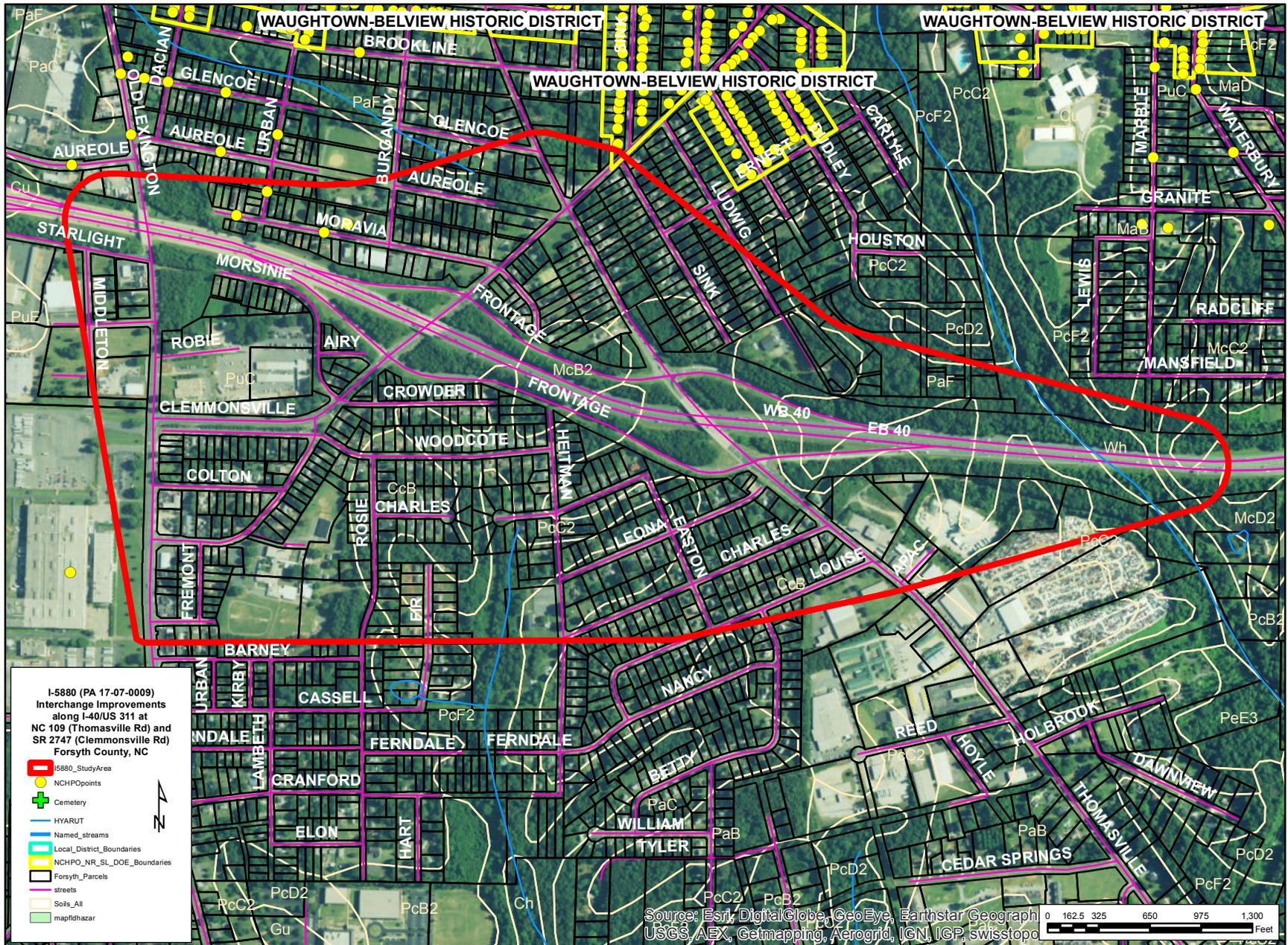


Figure 1: Winston-Salem East, NC (USGS 1994).



17-07-0009



## 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-5880	<b>County:</b>	Forsyth
<b>WBS No.:</b>	53080.1.1	<b>Document Type:</b>	CE
<b>Fed. Aid No:</b>		<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>	FHWA

**Project Description:**

Convert half diamond interchange on I-40/US311 at NC 109 to full diamond and remove connector road and half diamond interchange at Clemmons Road (SR2747).

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

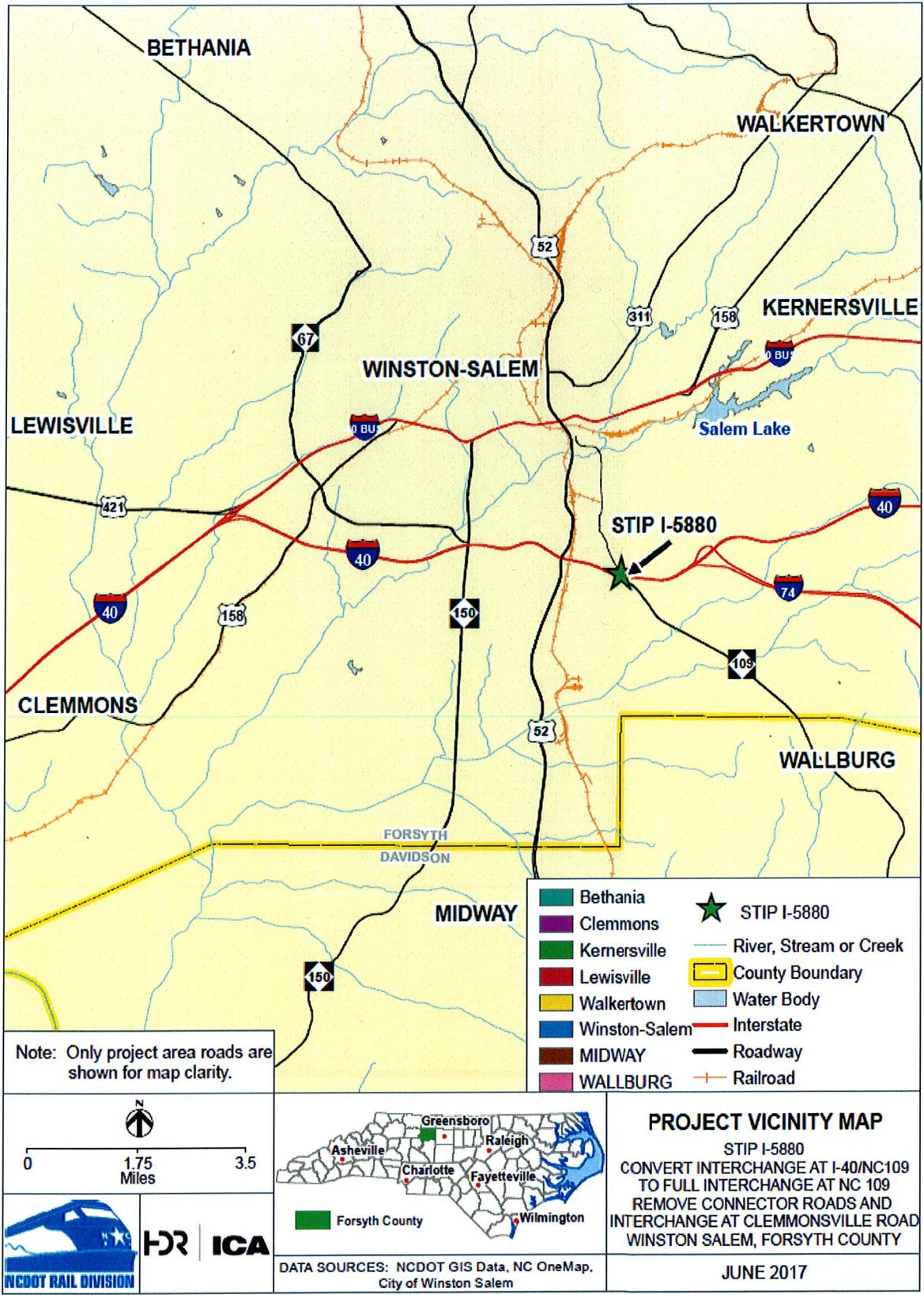
- There are no National Register-listed or Study Listed properties within the project's area of potential effects.  
There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within 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:**

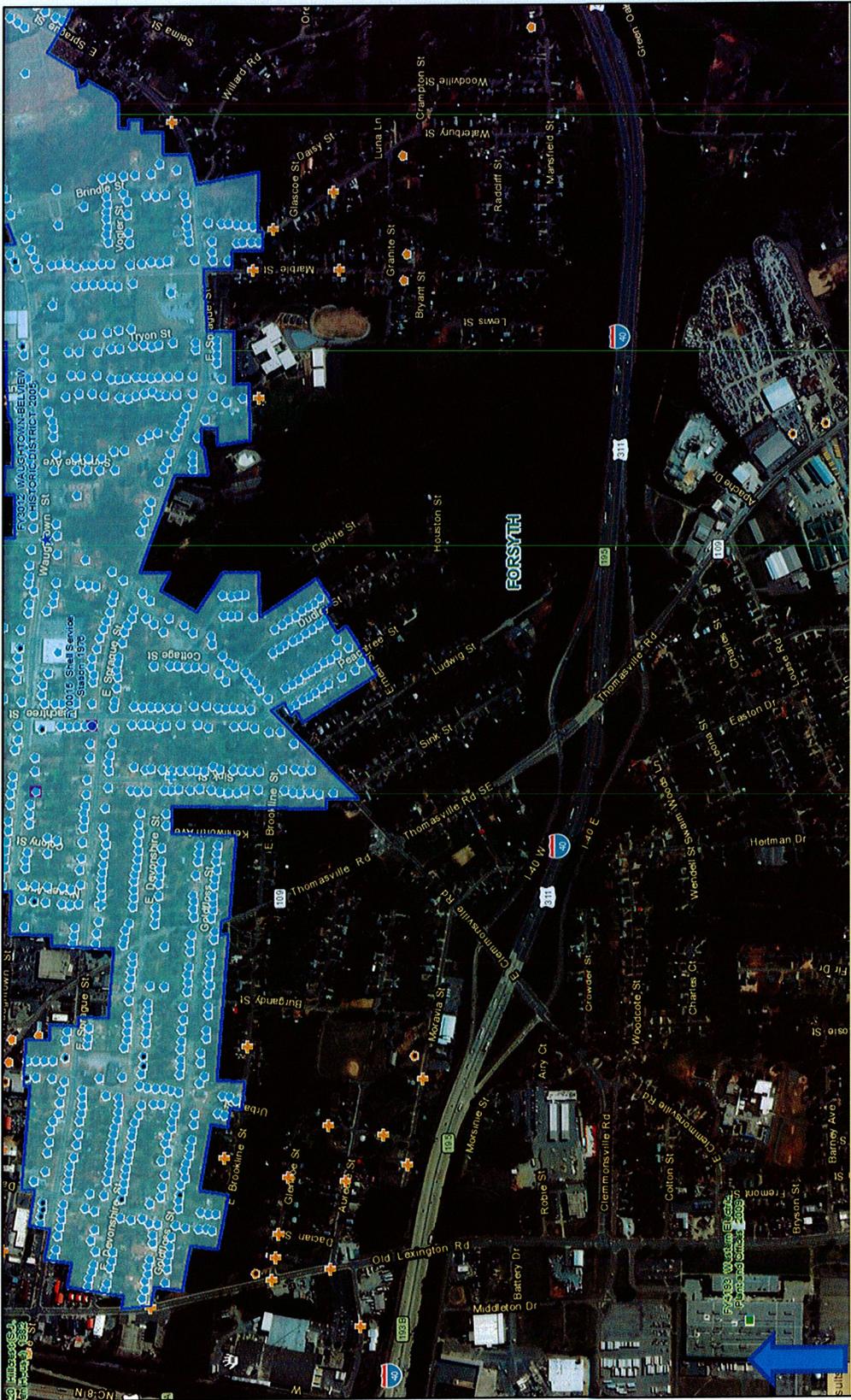
**Description of review activities, results, and conclusions:**

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on July 18, 2017. Based on this review, a Historic Architecture survey was required to assess structures that fall within the Area of Potential Effects, which follows the Study Area Boundaries on the following maps. The area was visually surveyed through Google Street View, and the author of the Forsyth County Survey was consulted. The area consists of early to mid-20<sup>th</sup> century houses that had little integrity when originally surveyed, and have diminished integrity since then. There are no additional National Register eligible properties, and no properties warrant further evaluation. One National Register listed site is within the APE, the Waughtown-Belview Historic District (FY3012). An assessment of effects was required for this district. Plans submitted December 10, 2018 show that the proposed work will not affect the Waughtown-Belview Historic District, as the proposed work lies south of the district. A roundabout proposed for Clemmons Road and Thomasville Road lies well outside of the district boundary. No historic properties are affected. If design plans change, additional review will be required.









**Waughtown-Belview Historic District (FY3012)**

Historic Architecture and Landscapes NO HISTORIC PROPERTIES PRESENT OR AFFECTED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.



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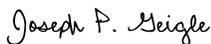
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