

MINIMUM CRITERIA DETERMINATION CHECKLIST

TIP Project No.: U-5848

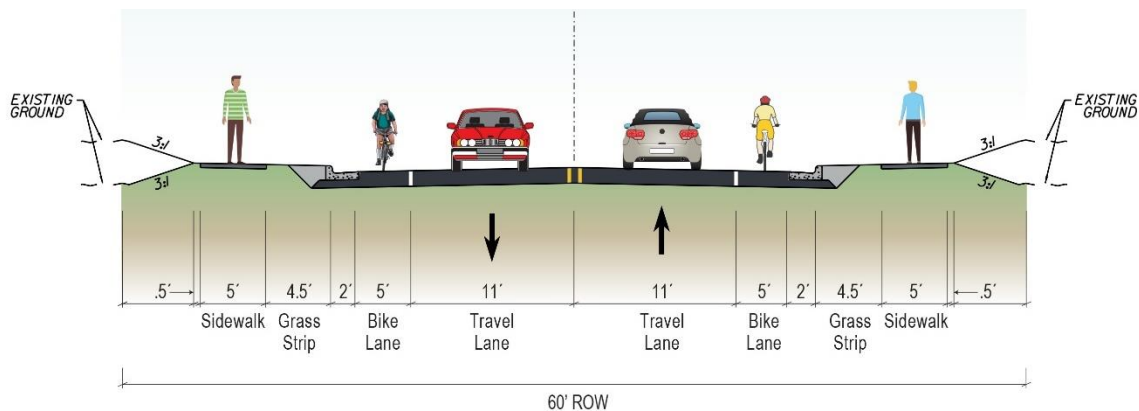
State Project No.: 50237.1.1

Project Location: South Churton Street (Old NC 86) to US 70A in the Town of Hillsborough, Orange County (see Figure 1).

Project Description: Project U-5848 proposes to extend Orange Grove Road (SR 1006) on new location from the existing terminus east of South Churton Street to US 70A. Orange Grove Road becomes Orange Grove Street east of South Churton Street and currently dead ends approximately 450 feet east of South Churton Street. Orange Grove Road / Street is proposed to be extended to the future entrance of the Collins Ridge neighborhood as part of that development. Project U-5848 will upgrade Orange Grove Street east of South Churton Street. The U-5848 project team is in coordination with the NCDOT Rail Division regarding their proposed realignment of the tracks to determine whether project U-5848 will bridge over the existing tracks, the proposed future tracks, or both track alignments, and will be influenced by the proposed schedule of the track realignment and location of the P-5701 passenger rail station.

The proposed typical section includes two 11-foot lanes, 5-foot bike lanes, curb and gutter, and 5-foot sidewalks on both sides of the road (see Exhibit 1), pending a cost-share and maintenance agreement with the Town of Hillsborough.

Exhibit 1: Proposed Typical Section



The purpose of this project is to reduce delays for vehicles traveling into downtown Hillsborough. A secondary purpose is to improve connectivity by providing a new east-west route through Hillsborough. Another benefit is improved bicycle and pedestrian accommodations into and through Hillsborough.

This project is included in the 2018-2027 NCDOT State Transportation Improvement Program (STIP) and is scheduled to begin right-of-way acquisition in fiscal year 2021 and construction in fiscal year 2023. The estimated cost in the STIP includes \$500,000 for project development and design, \$1,067,000 for right-of-way acquisition, \$155,000 for utility relocation, and \$4,104,000 for construction with a total project cost of \$5,826,000.

Anticipated Permit or Consultation Requirements: No permits are anticipated for this project.

Special Project Information:

Alternatives Considered and Not Carried Forward

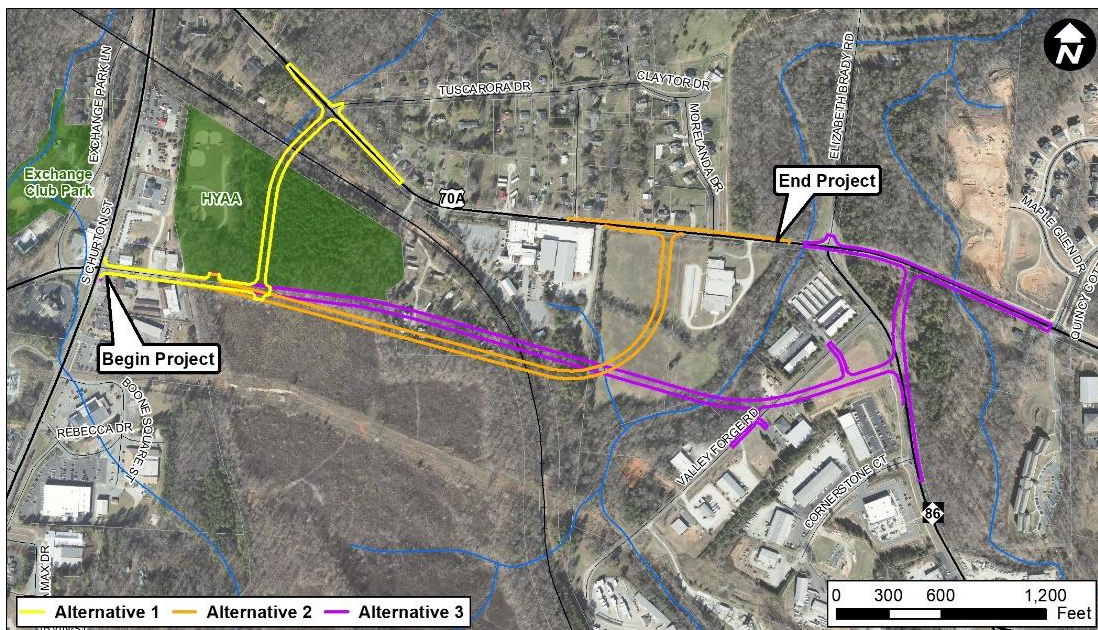
Three alternative alignments were initially developed for this project and were shown at a public meeting in March 2018 (see Exhibit 2). All three alternatives proposed a typical section with two 12-foot travel lanes, a 12-foot center-left-turn lane, 4-foot bike lanes, curb and gutter, and 5-foot sidewalks on both sides of the road.

Alternative 1 tied into US 70A near Tuscarora Drive and would include a rail bridge over the Orange Grove Road extension. Alternative 1 was anticipated to have the lowest construction cost, but the Town of Hillsborough would have been responsible for long-term maintenance of the railroad bridge. Alternative 1 was not carried forward based on comments from the Town of Hillsborough and the public, as well as the anticipated long-term maintenance costs and constructability concerns associated with this alternative.

Alternative 2 proposed connecting the Orange Grove Road extension to US 70A just west of Morelanda Drive, between the Wilmore Electronics and Sports Endeavors sites. This option would bridge the Orange Grove Road extension over the rail corridor. Based on input from the Town and the public, this alternative was not carried forward in its original alignment but was later modified to create Alternative 4.

Alternative 3 proposed extending Orange Grove Road to intersect with NC 86 south of US 70A and re-aligning the NC 86 and US 70A intersection, including bridging the rail corridor. Alternative 3 was anticipated to have the highest construction cost and impacts to jurisdictional resources and therefore was eliminated.

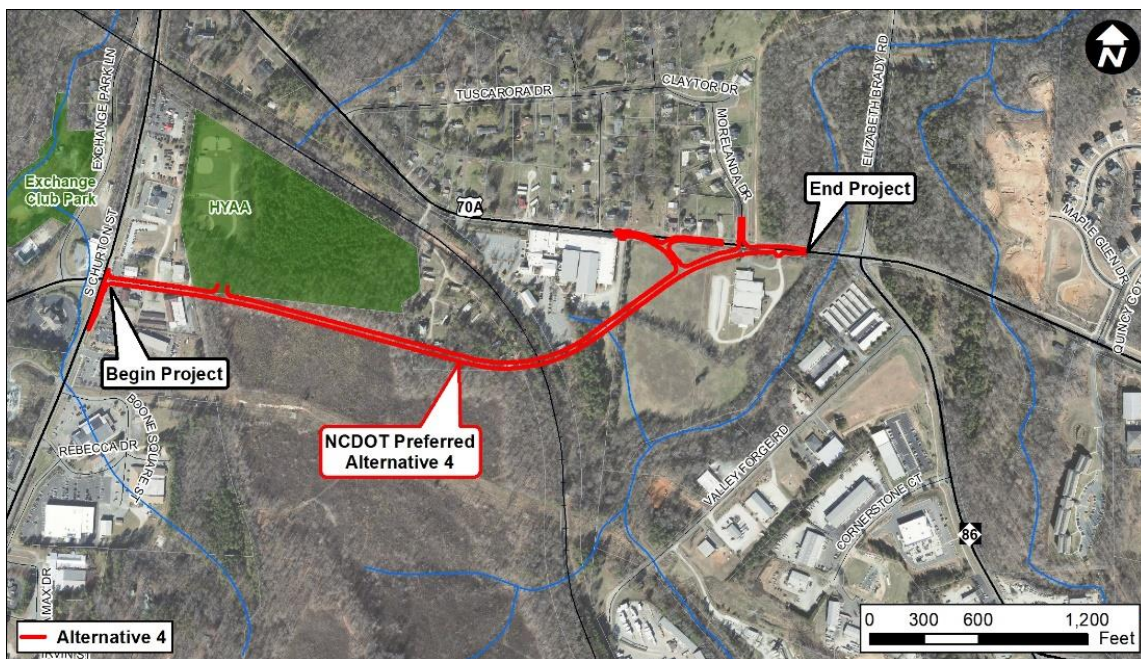
Exhibit 2: Alignment Alternatives shown at March 2018 Public Meeting



Preferred Alternative

Alternative 4, the NCDOT preferred alternative, modified the northern intersection of Alternative 2 so that the US 70A to the Orange Grove Road extension traffic movement would become the through movement (see Exhibit 3). The existing US 70A is proposed to be realigned to create a T-intersection with the Orange Grove Road extension. This change was made in coordination with the Town of Hillsborough for two primary reasons: to reduce the potential for cut-through traffic in the residential neighborhoods north of US 70A and to encourage drivers to utilize the new alignment to reduce queuing at the existing US 70A / South Churton Street intersection. The typical section was also revised to remove the center-left-turn lane and reduce the lane width to 11 feet.

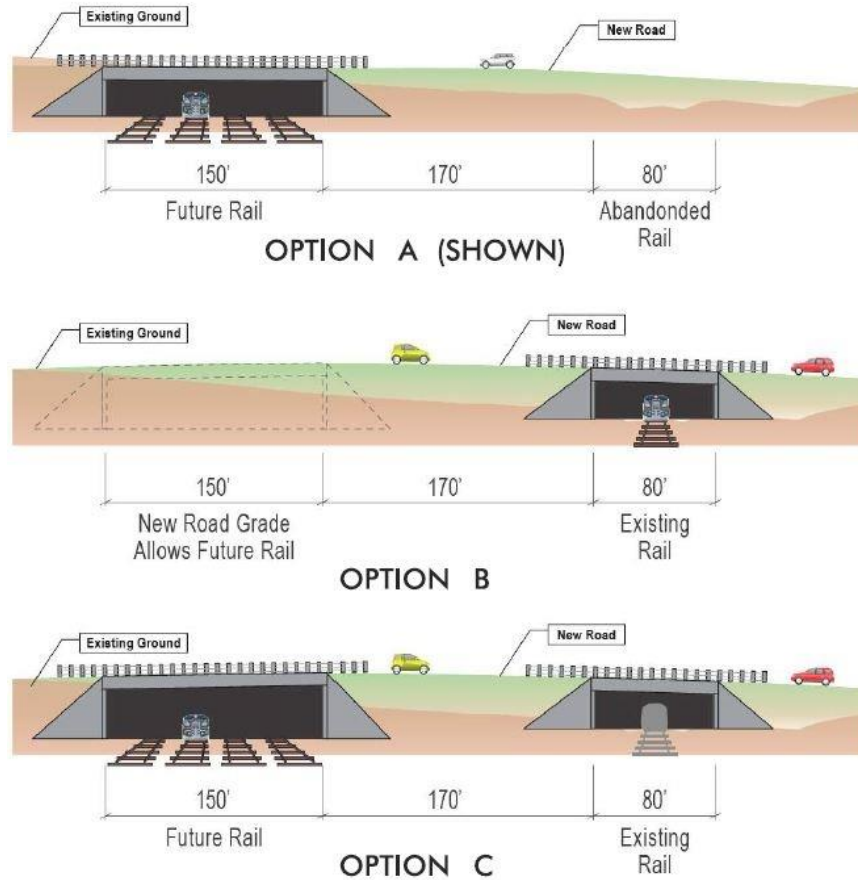
Exhibit 3: NCDOT Preferred Alternative shown at January 2019 Public Meeting



For Alternatives 2, 3, and 4, three options for bridging the roadway over the rail were presented (see Exhibit 4). The bridge option has not been selected.

- Option A: Construct a bridge over the proposed new rail alignment to be relocated prior to construction of U-5848.
- Option B: Construct a bridge over the existing rail alignment with potential for the rail re-alignment project to construct a bridge over the new rail alignment in the future.
- Option C: Construct a bridge over the existing and the proposed rail alignments.

Exhibit 4: Bridge over Railroad Right-of-Way Alternatives presented at Public Meetings



Traffic Analysis

Traffic volumes are forecasted to increase along South Churton Street, Orange Grove Road, and US 70A between 2016 and 2040 as shown in Table 1. The proposed alternative is anticipated to reduce congestion in the network by providing a new alternative route for drivers. The forecasted volumes shown below assume that the northbound to eastbound right-turn and westbound to southbound left-turn at the US 70A and South Churton Street intersection would be shifted to the Orange Grove Road and South Churton Street intersection in the build year.

Table 1: Forecasted Average Annual Daily Traffic (vehicles per day [vpd])

	2016 – No Build	2040 – No Build	2040 – Build U-5845 and U-5848
South Churton Street (north of Orange Grove Road)	13,100	18,700	15,700
South Churton Street (south of Orange Grove Road)	13,600	19,500	23,600
Orange Grove Road	4,500	7,200	7,000
Orange Grove Road extension	800	-	9,900
US 70A	8,100	9,800	5,300

Water Resources

Two jurisdictional streams and one jurisdictional wetland were identified in the study area as part of the *Natural Resources Technical Report* (NRTR) (November 2016). No additional jurisdictional resources were identified in the *Natural Resources Technical Report Addendum* (June 2019).

Federally Protected Species

There are five federally protected species listed for Orange County by the United States Fish and Wildlife Service (USFWS) (updated October 10, 2018): dwarf wedgemussel, Cape Fear shiner, smooth coneflower, Michaux's sumac, and bald eagle. Since the completion of the 2016 NRTR, the Cape Fear shiner has been listed as an endangered species in Orange County.

A review of NCNHP records, updated June 2016, indicates no known dwarf wedgemussel occurrences within 1 mile of the study area. Staff from the NCDOT Biological Surveys Group will conduct surveys for dwarf wedgemussel, if warranted, and render a biological conclusion. Since the project does not impact any streams it is anticipated that the biological conclusion will be "No Effect" and that surveys will not be warranted.

Due to the lack of proposed impacts to suitable habitat and the lack of known occurrences, it has been determined that the proposed project will have "No Effect" on the Cape Fear shiner.

Due to a lack of known occurrences and a lack of observed individuals in the project study area, it has been determined that the proposed project will have "No Effect" on smooth coneflower, Michaux's sumac, and bald eagle.

The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect." The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Orange County, where U-5848 is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

Hazardous Materials

Four sites of concern were identified in the April 13, 2016 GeoEnvironmental Pre-Scoping Report within the project's study area. These sites included two Underground Storage Tank (UST) facilities, one auto repair shop, and one inactive superfund site. These sites are anticipated to present a low to medium geoenvironmental impact to the project. In addition, two Aboveground Storage Tank (AST) incidents not included on the GeoEnvironmental Pre-Scoping Report (one on site #3 and one on site #5) were identified. These AST incidents are from the NC Department of Environmental Quality online database as of May 23, 2019. See Figures 2 and 2A-2C for the location of these sites. The proposed design is anticipated to only impact sites #2 and #4. Contamination concerns is low for Site #2 and medium for Site #4.

Table 2: Hazardous Material Sites Anticipated to Have Potential for Impacts

Site #	Type	Facility ID	Name
1	UST Incident	0-021558	Randy Gilmore Automotive
2	Active USTs	0-003939	Quickie Mart
3	UST/AST Incident	0-0022196	Gro Smart Nursery/Duke Power
4	Superfund	NCD 003-185-816	Sports Endeavors
5	AST Incident		Norfolk Southern

Cultural Resources

The State Historic Preservation Office (SHPO) made a determination of “No Effect” for Alternatives 2 and 3 and “No Adverse Effect” for Alternative 1 on October 31, 2017, and “No Effect” for Alternative 4 on December 11, 2018.

The NCDOT Archaeology Group conducted archaeological surveys for variations of Alternatives 1 and 3 in October 2016 and November 2017. No significant archaeological resources were identified, but further archaeological investigations were recommended if design plans were to change. “No National Register of Historic Places Eligible or Listed Archaeological Sites Present” forms were submitted on October 25, 2016 and December 30, 2017 (see attached PA 16-09-0025 and 16-09-0025 Addendum). This was followed by a survey for Alternative 4 in November 2018. No significant archaeological resources were identified during the investigation and a third “No National Register of Historic Places Eligible or Listed Archaeological Sites Present” form was submitted on November 20, 2018 (see attached PA 16-09-0025 Addendum II). No further archaeological work is recommended. However, if design plans expand outside the Archaeological area of potential effects (APE) for Alternative 4, then further archaeological work is required.

Indirect and Cumulative Effects

An *Indirect Cumulative Effects Screening Report* was completed in September 2016 to examine the potential indirect and cumulative effects of this project within the project Future Land Use Study Area (FLUSA). Project U-5848, in combination with other projects already proposed within the FLUSA, will change a large portion of land from pervious to impervious, which will impact the local watershed. Once these proposed projects are completed, less than a quarter of the FLUSA will have the potential to be developed in the future. However, this watershed is classified as WS-V, and rules and statutes do not restrict the density of development. All future development impacts to the watershed will be mitigated by local and state regulations. These proposed developments include the rail station (P-5701), Collins Ridge, and Valley Forge Self-Storage. This development is anticipated to occur with or without this project. All properties accessed by the proposed road will also have access from existing roads. Therefore, this study concluded that construction of this project is expected to have minor indirect effects on land use decisions within the FLUSA but is not expected to have an impact on pace or type of development.

Community Resources

There are no community resources along or adjacent to the corridor. Business nodes are at both ends of the proposed alignment. Impacts to several businesses are anticipated but are not expected to affect the overall viability of the business nodes.

Environmental Justice

While Census data does not indicate a notable presence of populations meeting the criteria for Environmental Justice or protected by Title VI and related statutes within the study area, low-income communities were observed during the field visit and were noted by local planners. Mobile homes were observed on the north side of US 70A across from Sports Endeavors.

Census data indicates that populations within study area do not meet US Department of Justice Limited English Proficiency (LEP) or Language Assistance (LA) thresholds.

Public Involvement

A local officials informational meeting and public meeting were held at the Hillsborough Main Library on March 19, 2018 with approximately 30 people in attendance. Postcards were mailed to property owners and tenants to advertise the meeting. A total of 13 written comments were received during the comment period ending April 6, 2018. Comments received included concern over proposed multi-modal facilities, traffic, safety, the overall design, and comments expressing concern or support for the various alternatives.

A second local officials meeting and public meeting was held at the Town Hall Annex on January 8, 2019 with approximately 134 people in attendance. These meetings addressed both the U-5845 and U-5848 projects. Project U-5845 proposes to widen South Churton Street from I-40 to Orange Grove Road. Postcards were mailed to property owners and tenants to advertise the meeting. A total of 13 written comments addressing Project U-5848 and an additional 13 comments addressing both U-5848 and U-5845 were received during the comment period ending January 25, 2019. Comments received expressed some concerns regarding the change in traffic patterns and the impacts to businesses, particularly Sports Endeavors and Wilmore Electronics.

A resolution in support of the “No Build Alternative” for U-5848 was passed by the Town of Hillsborough Commissioners in March 2019. The resolution cited right-of-way, business, and traffic impacts, inadequate access for pedestrians and bicyclists into downtown Hillsborough, and no traffic congestion improvements in areas of concern to the Town. In addition, the Durham Chapel Hill Carrboro MPO signed an amendment in April 2019 to modify the NCDOT 2018-2027 Transportation Improvement Program to remove the U-5848 project.

Technical Reports Completed to Date

- Crash Analysis Report (August 2018)
- Community Characteristics Report (October 2016)
- Community Impact Assessment (June 2019)
- GeoEnvironmental Pre-Scoping Report (April 2016)

- Historic Architecture and Landscapes Assessment of Effects Form (October 2017)
- Historic Architecture and Landscapes Assessment of Effects Form Revised (December 2018)
- Historic Architecture and Landscapes Effects Required Form (August 2017)
- Indirect and Cumulative Effects Screening Report (September 2016)
- Natural Resources Technical Report (November 2016)
- Natural Resources Technical Report Addendum (June 2016)
- No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form (October 2016)
- No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form Addendum (December 2017)
- No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form Addendum II (November 2018)
- Traffic Capacity Analysis Report (May 2017)
- Traffic Capacity Analysis Addendum (November 2018)
- Traffic Forecast (September 2016)

PART A: MINIMUM CRITERIA

- | | YES | NO |
|---|-------------------------------------|--------------------------|
| 1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is <u>not</u> required? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| If yes, under which category? | | |
| (15) Construction of a new two-lane highway in accordance with accepted design practices and DOT standards and specifications involving less than a total of 25 cumulative acres of ground surface limited to a single project, noncontiguous to any other project making use of this provision | | |

PART B: MINIMUM CRITERIA EXCEPTIONS

- | | YES | NO |
|--|--------------------------|-------------------------------------|
| 2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

- | | YES | NO |
|--|--------------------------|-------------------------------------|
| 9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action located in an Area of Environmental Concern, as defined in the Coastal Area Management Act? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Cultural Resources

- | | | |
|---|--------------------------|-------------------------------------|
| 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

PART D:

- | | |
|--|--|
| 16. Project length: | 0.4 miles |
| 17. Right of Way width: | 90 feet |
| 18. Project completion date: | _____ |
| 19. Total acres of newly disturbed ground surface: | 12.8 acres |
| 20. Total acres of wetland impacts: | None |
| 21. Total linear feet of stream impacts: | None |
| 22. Project purpose: | To reduce delays for
vehicles traveling into
downtown Hillsborough |

Prepared by:

DocuSigned by:
W. H. E. I.
E3E1953073CC478

6/27/2019

For: Teresa Gresham, P.E., Consultant Project Manager
Kimley-Horn and Associates, Inc.

Date:

Reviewed by:

DocuSigned by:
Gene Tarascio
E3E98ACA2C41461

6/27/2019

Gene Tarascio, Project Manager
Project Management Unit
North Carolina Department of Transportation

Date:

DocuSigned by:
Laura E. Sutton
AE35E3E6727640E...

6/27/2019

Laura Sutton, P.E., Team Lead
Project Management Unit
North Carolina Department of Transportation

Date:

Project Commitments

Orange County Orange Grove Road Extension Project

WBS No. 50237.1.1

TIP No. U-5848

Threatened and Endangered Species

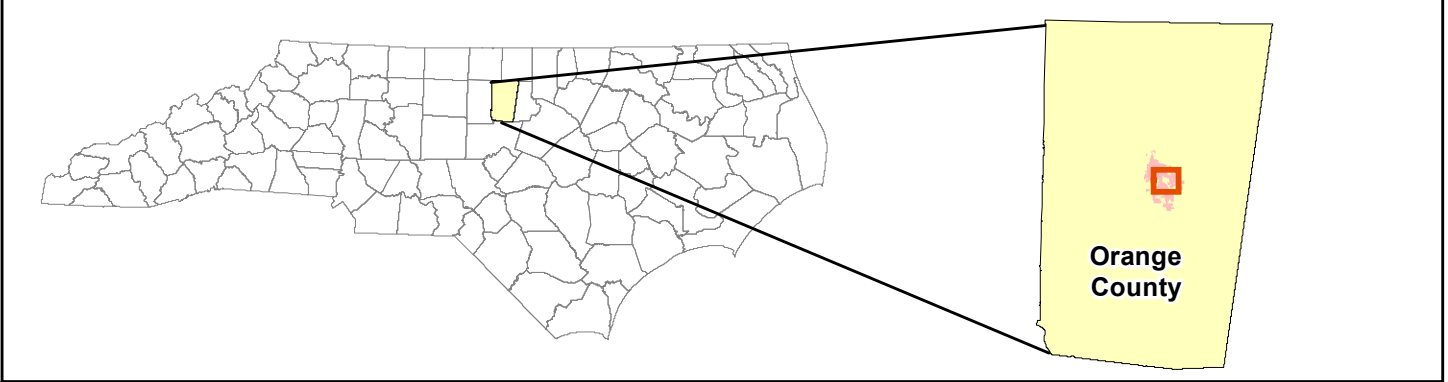
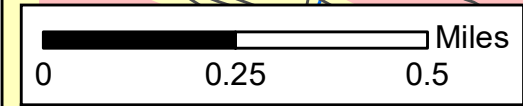
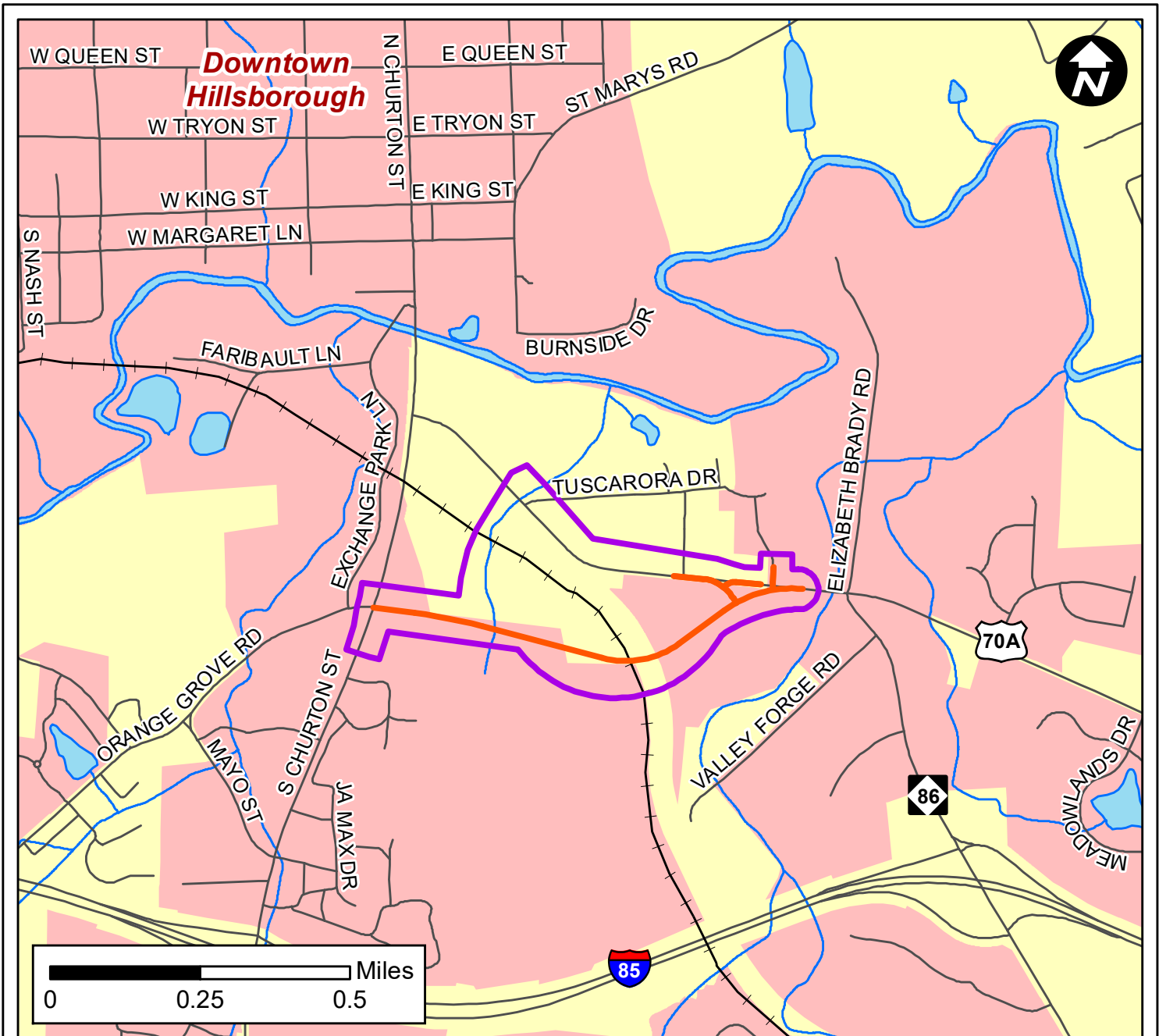
Staff from the NCDOT Biological Surveys Group will conduct surveys for dwarf wedgemussel, if warranted, and render a biological conclusion. Since the project does not impact any streams it is anticipated that the biological conclusion will be “No Effect” and that surveys will not be warranted.

Transportation Program Management Unit

NCDOT will coordinate with the Town of Hillsborough concerning cost-share and maintenance agreement for sidewalk construction and any other requested betterments.

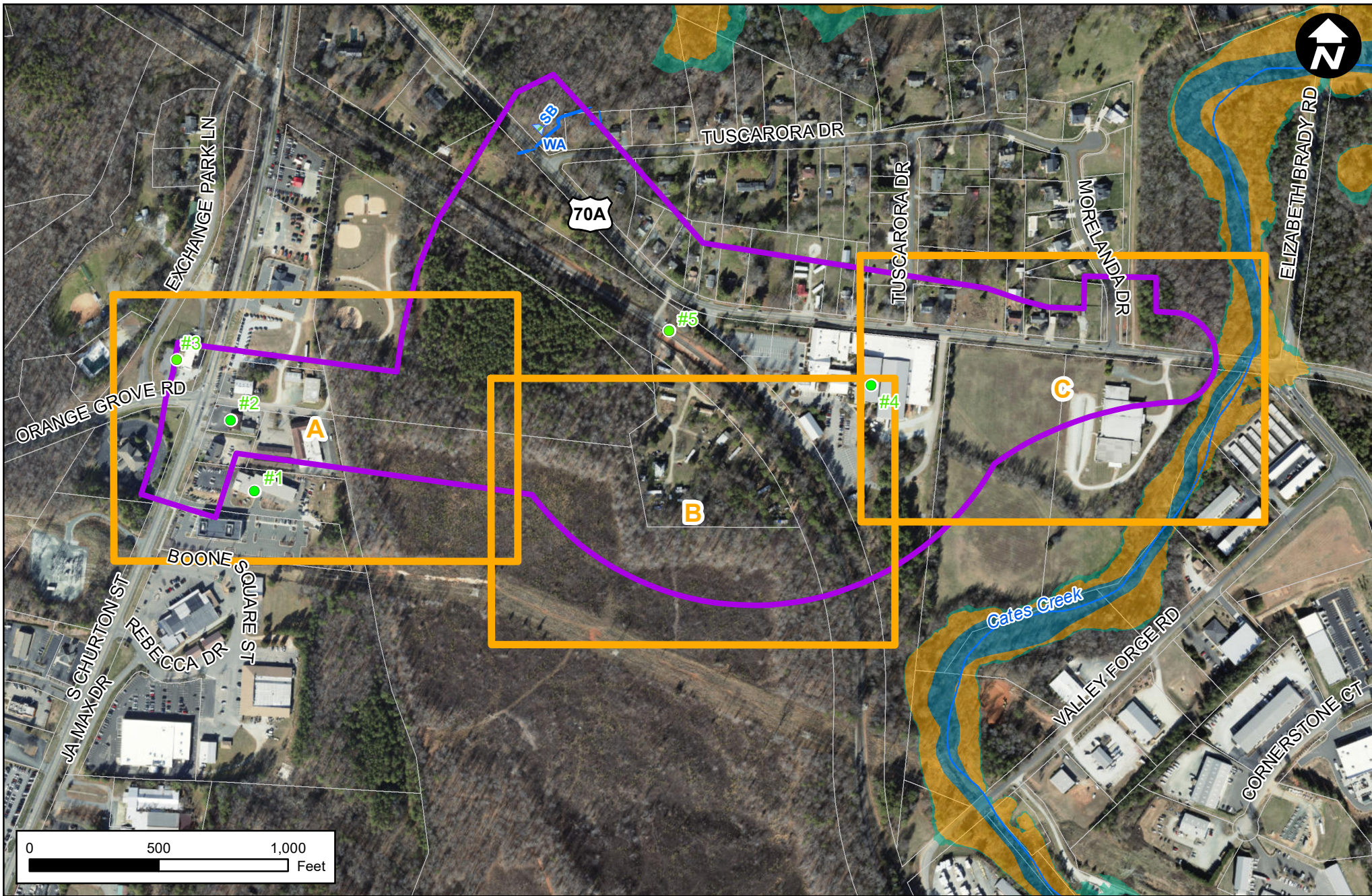
NCDOT GeoEnvironmental Section

Five sites of concern were identified by the April 13, 2016 GeoEnvironmental Pre-Scoping Report and the NC Department of Environmental Quality database as of May 23, 2019. Sites of concern that will be impacted by the project will have a Phase II GeoEnvironmental Investigation performed on them and Right-of-Way Acquisition Recommendations will be provided prior to the right-of-way being acquired. Contaminated soil, underground fuel storage tanks, and ground water monitoring wells in conflict with the project will be removed prior to let or addressed in a Project Special Provision.



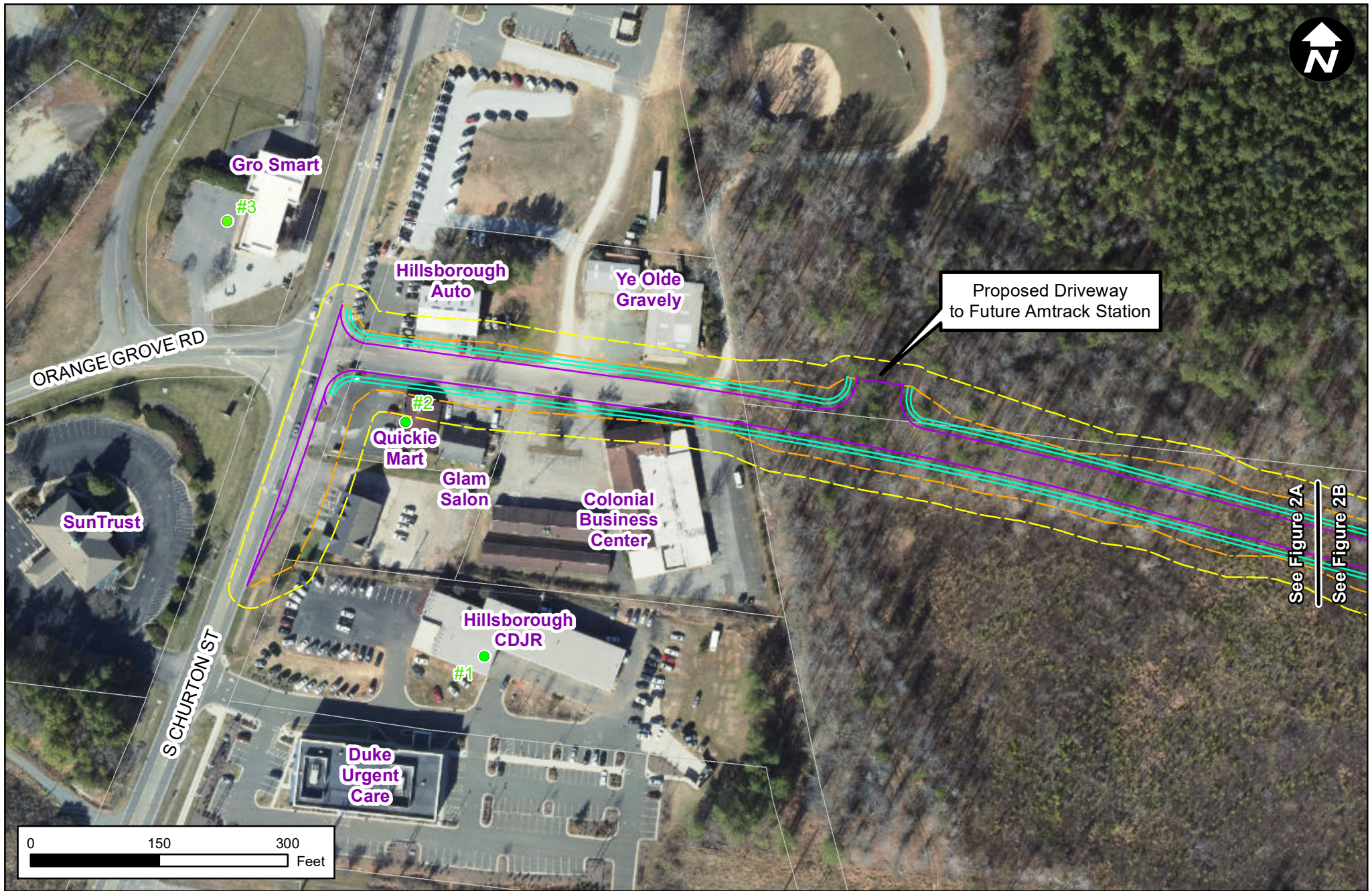
- U-5848 Alternative 4 Alignment
- Proposed Roadway Bridge
- Railroad
- Streams (NCDEQ)
- U-5848 Study Area
- Body of Water (NCDEQ)
- Town of Hillsborough
- Orange County

Figure 1
Vicinity Map
 STIP Project U-5848
 Orange Grove Road Extension
 Town of Hillsborough
 Orange County



- Figures 2A-2C Extents
- U-5848 Study Area
- Potential Hazardous Material Site
- 500-Year Floodplain
- 100-Year Floodplain
- Delineated Wetlands
- Delineated Streams
- Parcels

Figure 2
Natural Environment
 STIP Project U-5848
 Orange Grove Road Extension
 Town of Hillsborough
 Orange County



See Figure 2A

See Figure 2B









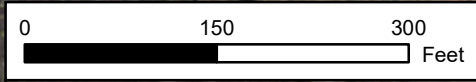
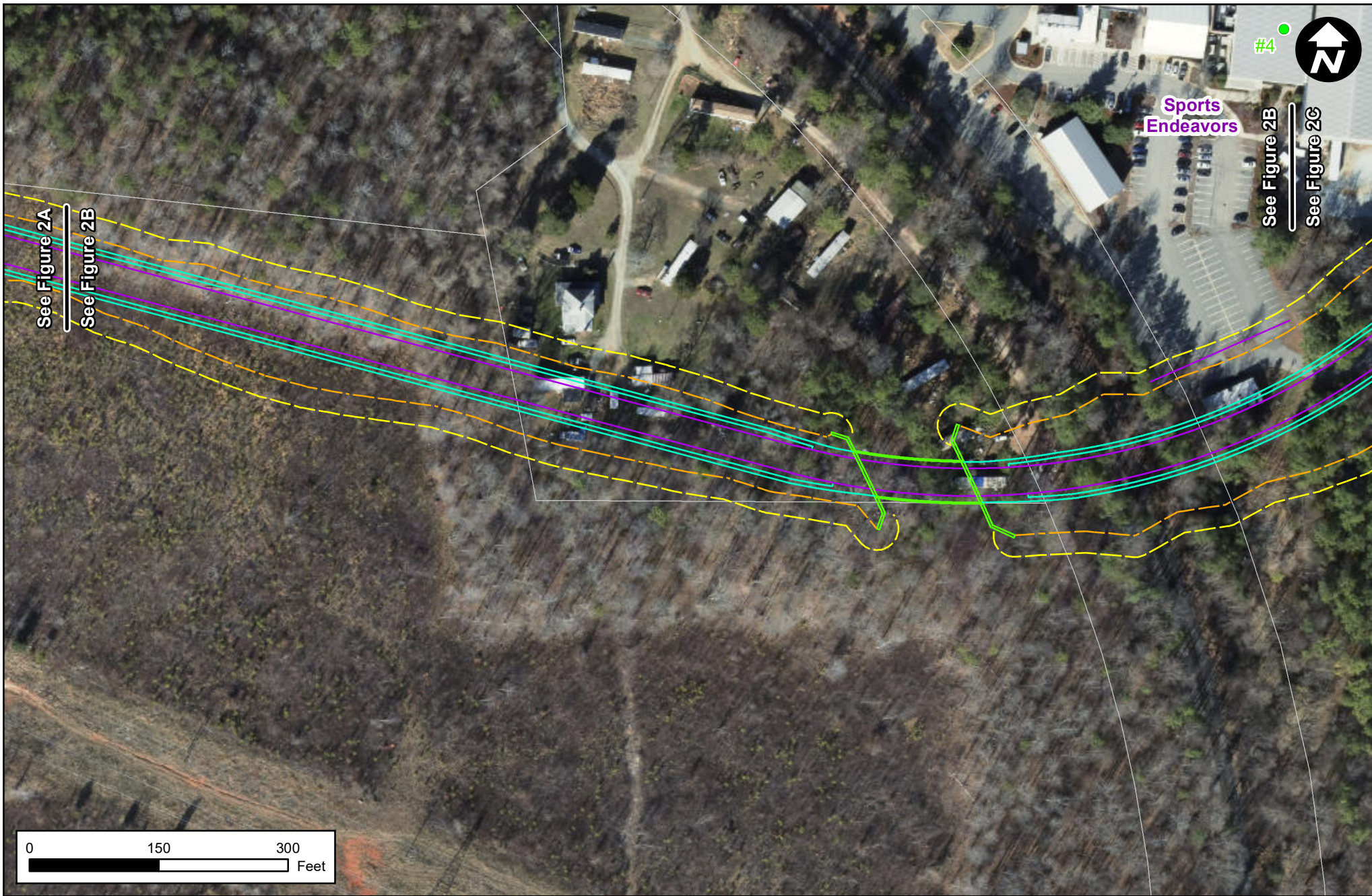
-  Parcels
-  25' Slope Stakes Buffer
-  Proposed Slope Stakes
-  Proposed Sidewalk
-  Proposed Edge of Travel
-  Potential Hazardous Material Site

Figure 2A
Natural Environment
STIP Project U-5848
Orange Grove Road Extension
Town of Hillsborough
Orange County










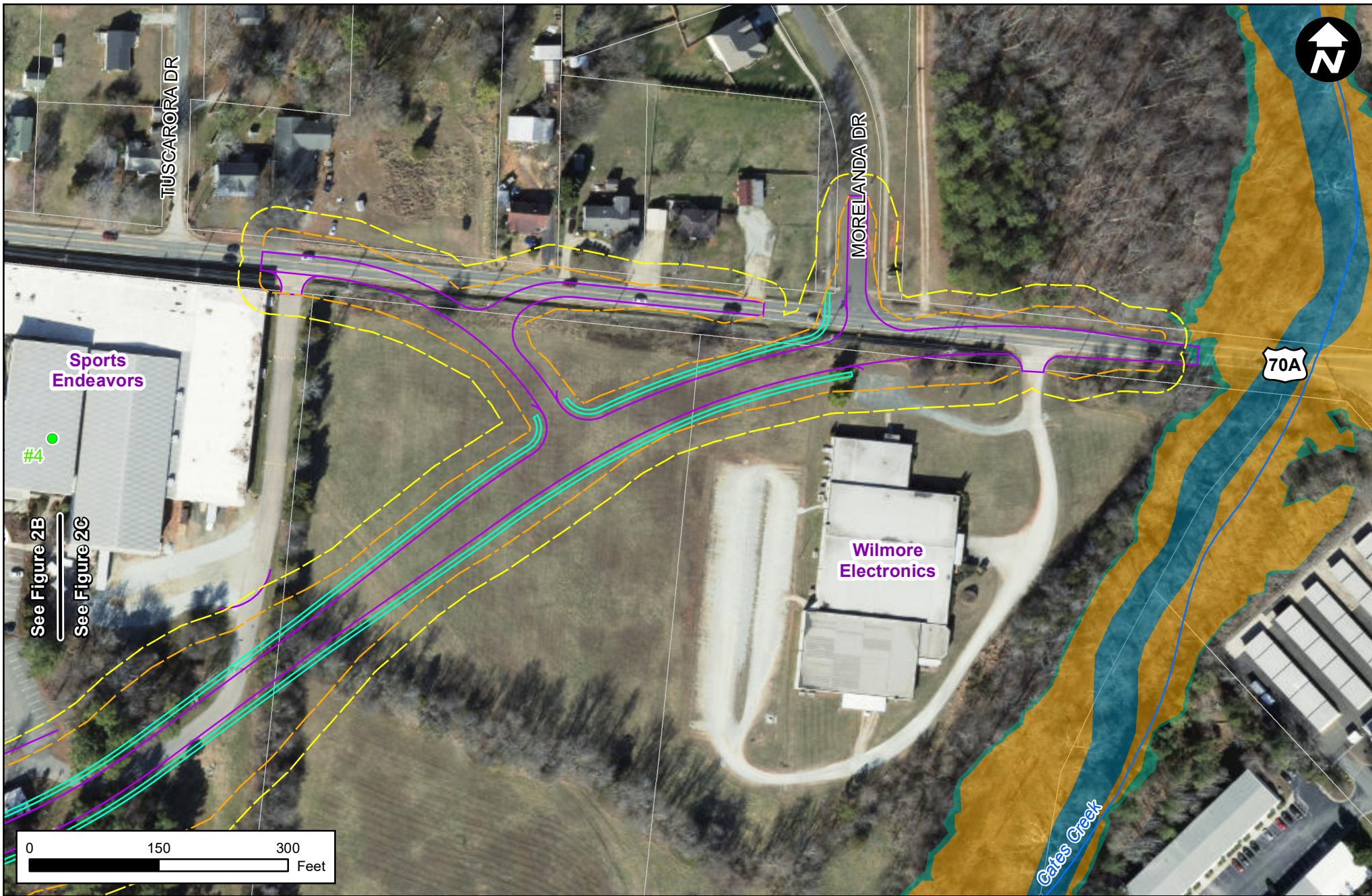
-  Parcels
-  25' Slope Stakes Buffer
-  Proposed Slope Stakes
-  Proposed Sidewalk
-  Proposed Edge of Travel
-  Proposed Roadway Bridge
-  Potential Hazardous Material Site

Figure 2B
Natural Environment
 STIP Project U-5848
 Orange Grove Road Extension
 Town of Hillsborough
 Orange County



- Parcels
- Streams
- 25' Slope Stakes Buffer
- Proposed Slope Stakes
- Proposed Sidewalk
- Proposed Edge of Travel
- Potential Hazardous Material Site

Figure 2C
Natural Environment
 STIP Project U-5848
 Orange Grove Road Extension
 Town of Hillsborough
 Orange County



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS 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

Project No:	U-5848	County:	Orange
WBS No.:	50237.1.1	Document Type:	
Fed. Aid No.:		Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	Yes <input checked="" type="checkbox"/> No	Permit Type(s):	
Project Description: Extend SR 1006 (Orange Grove Road) on new location to US 70 Business in Hillsborough (no off-site detour planned).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions: HPOWeb reviewed on 13 July 2017 and yielded one NR, one SS, and no DE, SL, LD properties in the Area of Potential Effects (APE). The APE, illustrated on the attached map, encompasses all proposed alternatives and potential impacts to historic architectural resources. Completion of review awaited availability of design, funding, and permitting information. Orange County mapping, aerial photography, and tax information indicated a mostly developed APE with residential and commercial resources dating from the 1910s to the 2000s (viewed 13 July 2017). Part of the APE is contained within the National Register (NR)-listed Hillsborough Historic District (OR0077) and that part of the historic district not locally designated. Alternative D₂ is proximate to the previously recorded Occonechi Gates (OR0996) at the intersection of SR 1705 (Tuscarora Drive) and US 70. The comprehensive architectural survey of Orange County (1992; 1993-4; 2001-4; 2014-present), as well as other studies, record no additional resources in the APE besides the historic district and the gates. County GIS/tax materials and other visuals clearly illustrate the relative placement of the National Register-listed and other resources and the proposed work, which indicates the need for an effects consultation with the state historic preservation office. As the project is state-funded and requires no Federal permits or other involvement, only GS 121-12(a) applies, concerning only the Hillsborough Historic District, as a listed National Register property.

ASSESSMENT OF EFFECTS

Property Name:	Hillsborough Historic District	Status:	NR
Survey Site No.:	OR0077	PIN:	Multiple
Effects			
<input checked="" type="checkbox"/> No Effect <input checked="" type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect ALTS. 2 & 3 ALT. 1			

Explanation of Effects Determination: Alternative 1 (state-funded, no Federal involvement), Ties into existing US 70A and Tuscarora Drive just within southern boundary of Hillsborough HD (and outside locally designated area) and imposes no negative impacts on any contributing resources.
Alternative 2 (state-funded, no Federal involvement) located outside HD, as is Alternative 3 (state-funded, possible Federal permit) - neither will affect any significant resources.

List of Environmental Commitments: Alternative 1 - plans for signal installation at intersection of Orange Grove Road (Extended) / Tuscarora Drive and US 70A to be reviewed by NCHPO and NCDOT- Historic Architecture.

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f): NA

SUPPORT DOCUMENTATION

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

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

Vanessa C. Patrick

10-31-17

NCDOT Architectural Historian

Date

Renee Hedrick-Ealey

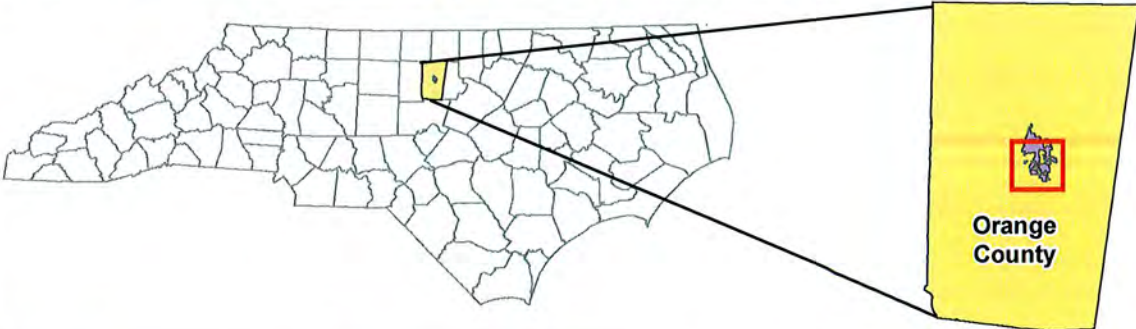
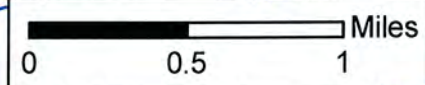
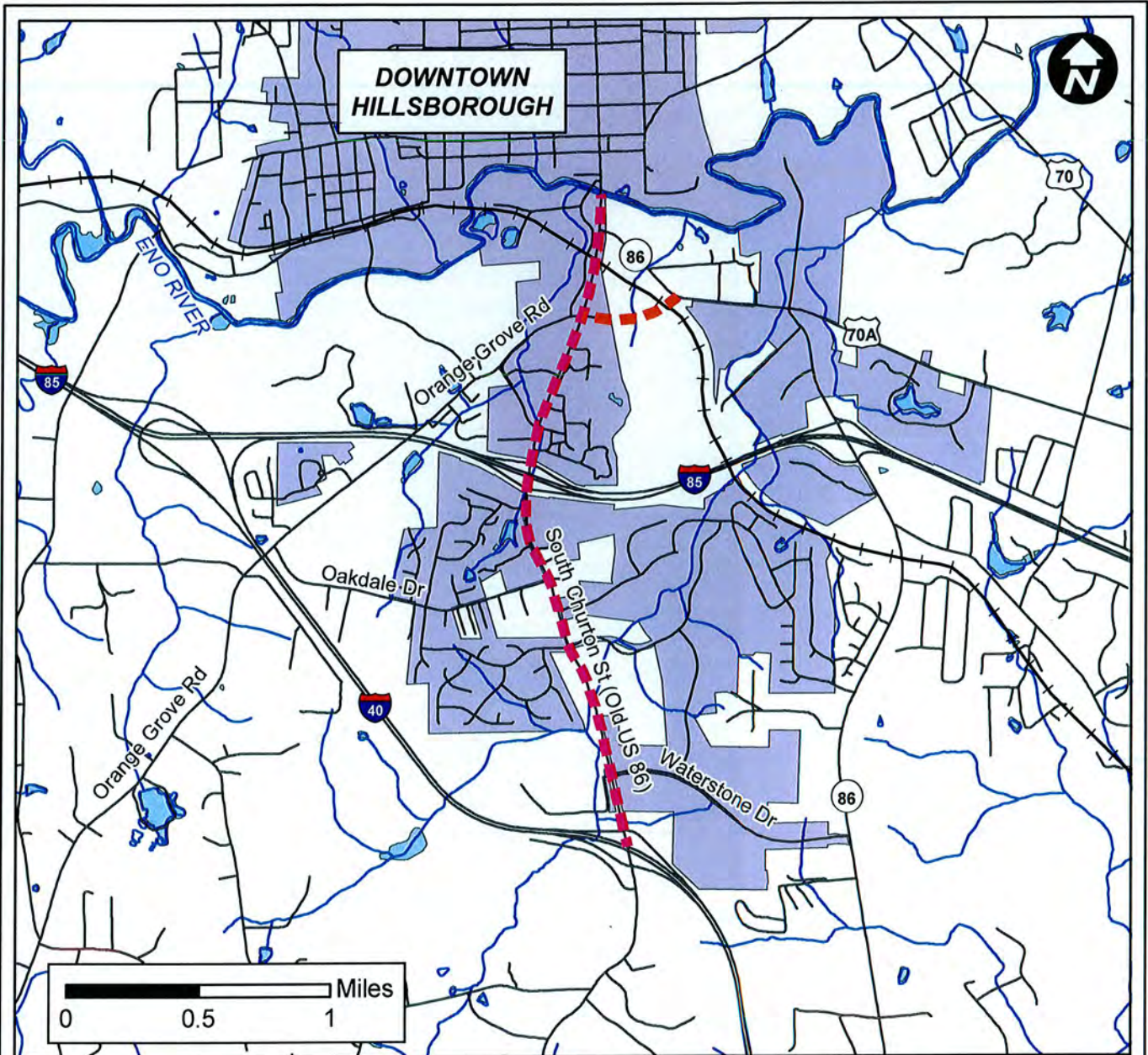
10.31.17

State Historic Preservation Office Representative

Date

Federal Agency Representative

Date



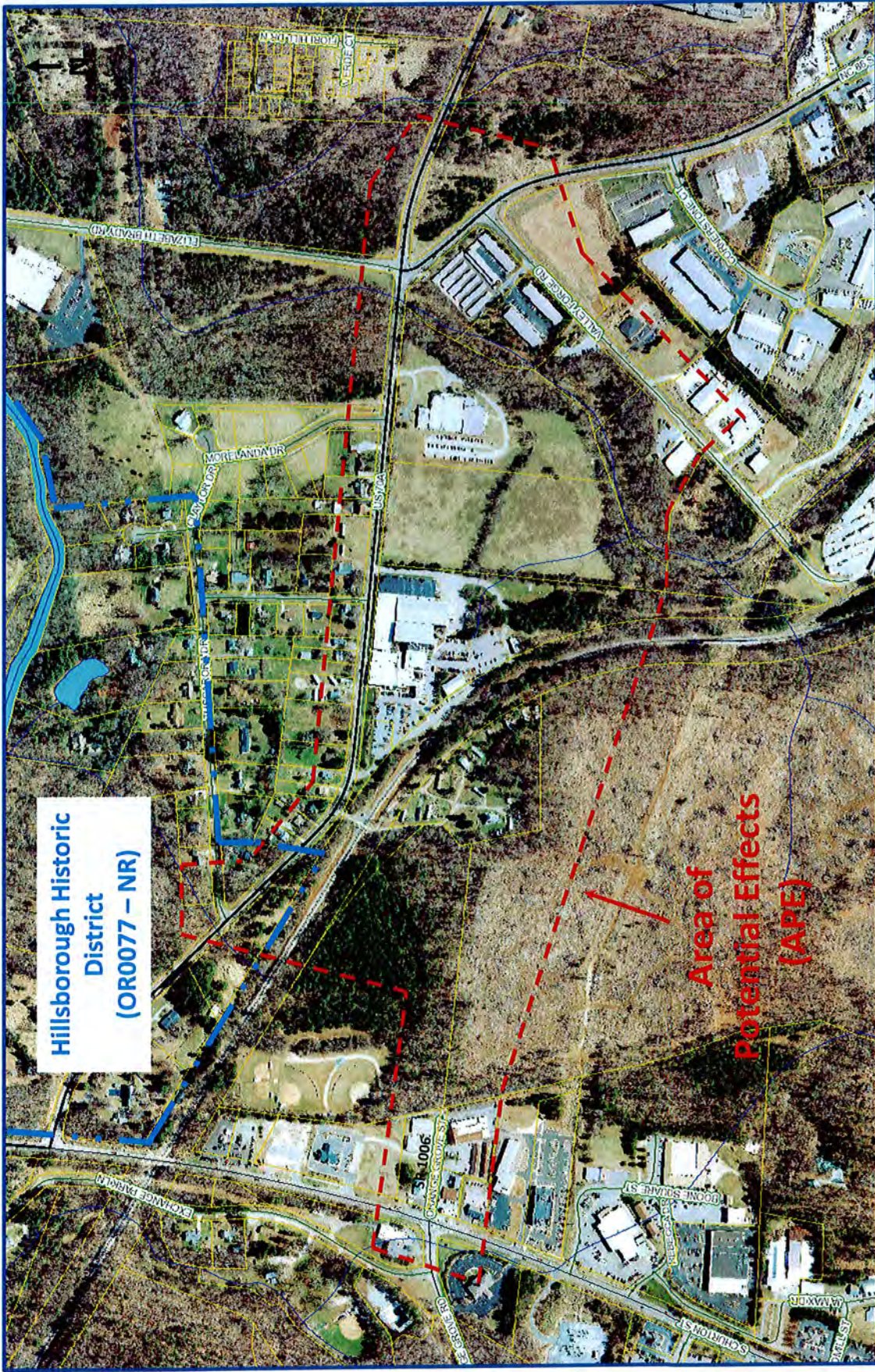
Orange County



- U-5848
- U-5845
- Railroad
- Streets
- NWI Wetlands
- Streams
- Town of Hillsborough

Figure 1
Vicinity Map
 Project Nos. U-5845 and U-5848
 Hillsborough
 Orange County

U-5848, Tracking No. 16-09-0025



Hillsborough Historic District (OR0077 - NR)

Area of Potential Effects (APE)

Area of Potential Effects (APE) - - - **U-5848, Orange County**
WBS No. 50237.1.1 **Base map: Current Orange County GIS, nts**

NCDOT – Historic Architecture
 July 2017
 Tracking No. 16-09-0025



**HISTORIC ARCHITECTURE AND LANDSCAPES
 ASSESSMENT OF EFFECTS 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

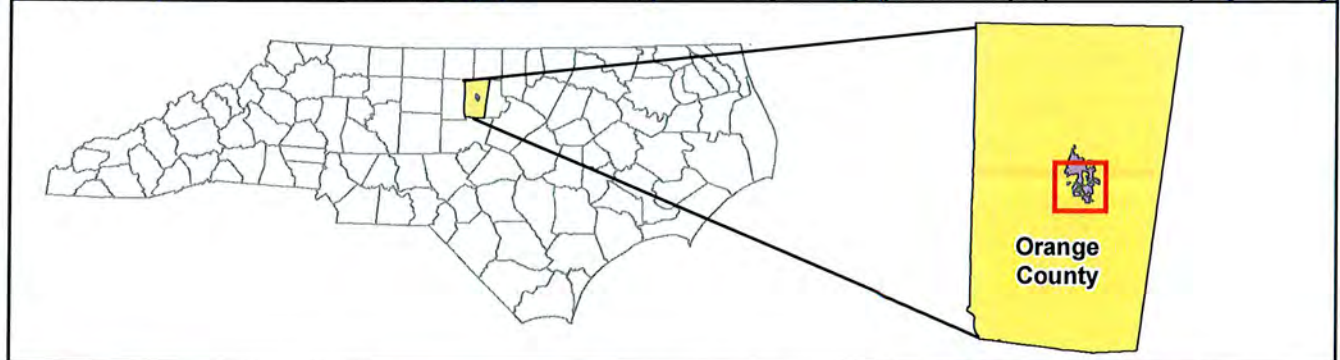
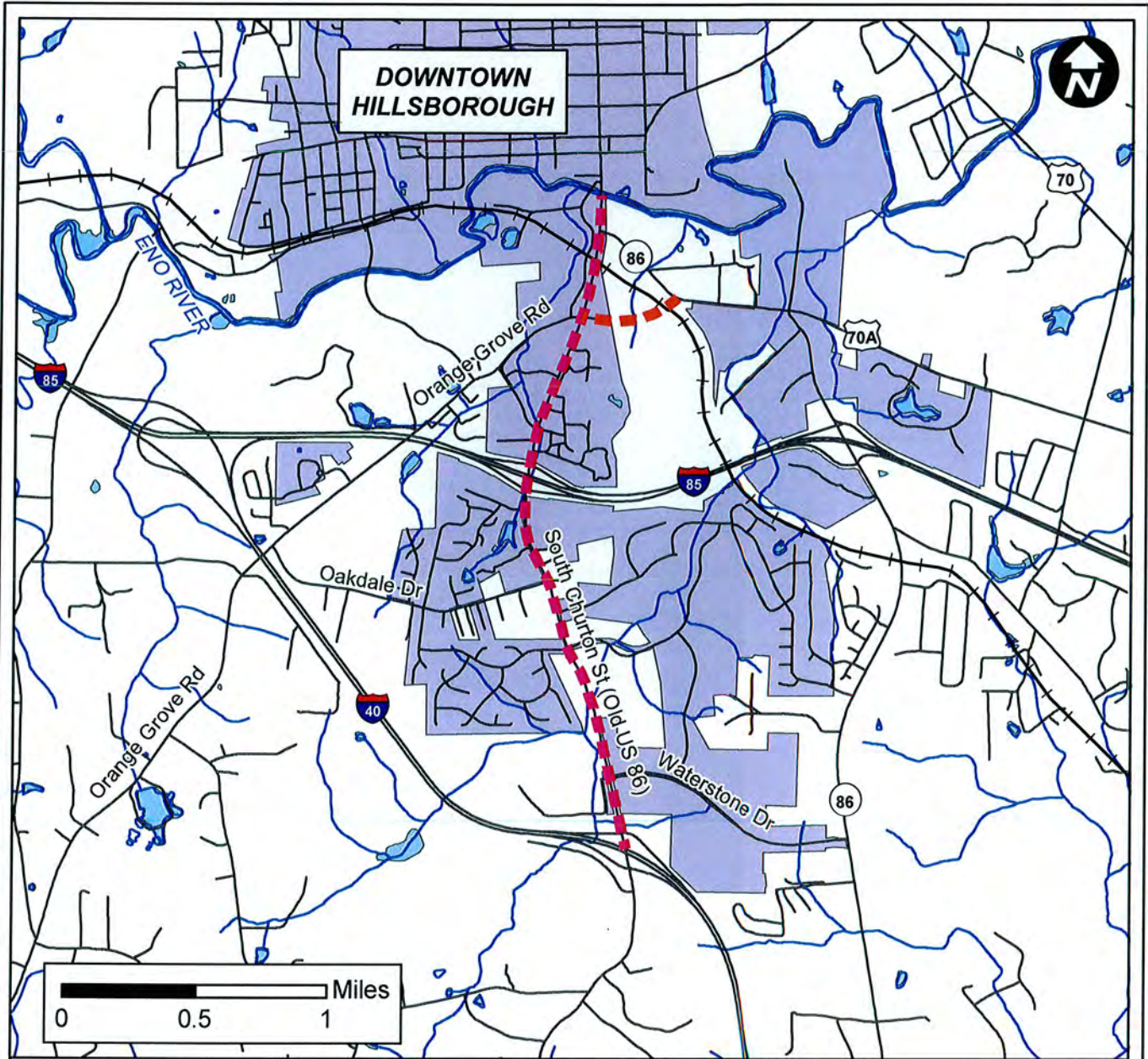
Project No:	U-5848	County:	Orange
WBS No.:	50237.1.1	Document Type:	
Fed. Aid No:		Funding:	X State <input type="checkbox"/> Federal
Federal Permit(s):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Permit Type(s):	
Project Description: Extend SR 1006 (Orange Grove Road) on new location to US 70 Business in Hillsborough (no off-site detour planned).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions: HPOWeb reviewed on 13 July 2017 and yielded one NR, one SS, and no DE, SL, LD properties in the Area of Potential Effects (APE). The APE, illustrated on the attached map, encompasses all proposed alternatives and potential impacts to historic architectural resources. Completion of review awaited availability of design, funding, and permitting information. Orange County mapping, aerial photography, and tax information indicated a mostly developed APE with residential and commercial resources dating from the 1910s to the 2000s (viewed 13 July 2017). Part of the APE is contained within the National Register (NR)-listed Hillsborough Historic District (OR0077) and that part of the historic district not locally designated. Alternative D₁ is proximate to the previously recorded Occoneechi Gates (OR0996) at the intersection of SR 1705 (Tuscarora Drive) and US 70. The comprehensive architectural survey of Orange County (1992; 1993-4; 2001-4; 2014-present), as well as other studies, record no additional resources in the APE besides the historic district and the gates. County GIS/tax materials and other visuals clearly illustrate the relative placement of the National Register-listed and other resources and the proposed work, which indicates the need for an effects consultation with the state historic preservation office. As the project is state-funded and requires no Federal permits or other involvement, only GS 121-12(a) applies, concerning only the Hillsborough Historic District, as a listed National Register property.

ASSESSMENT OF EFFECTS

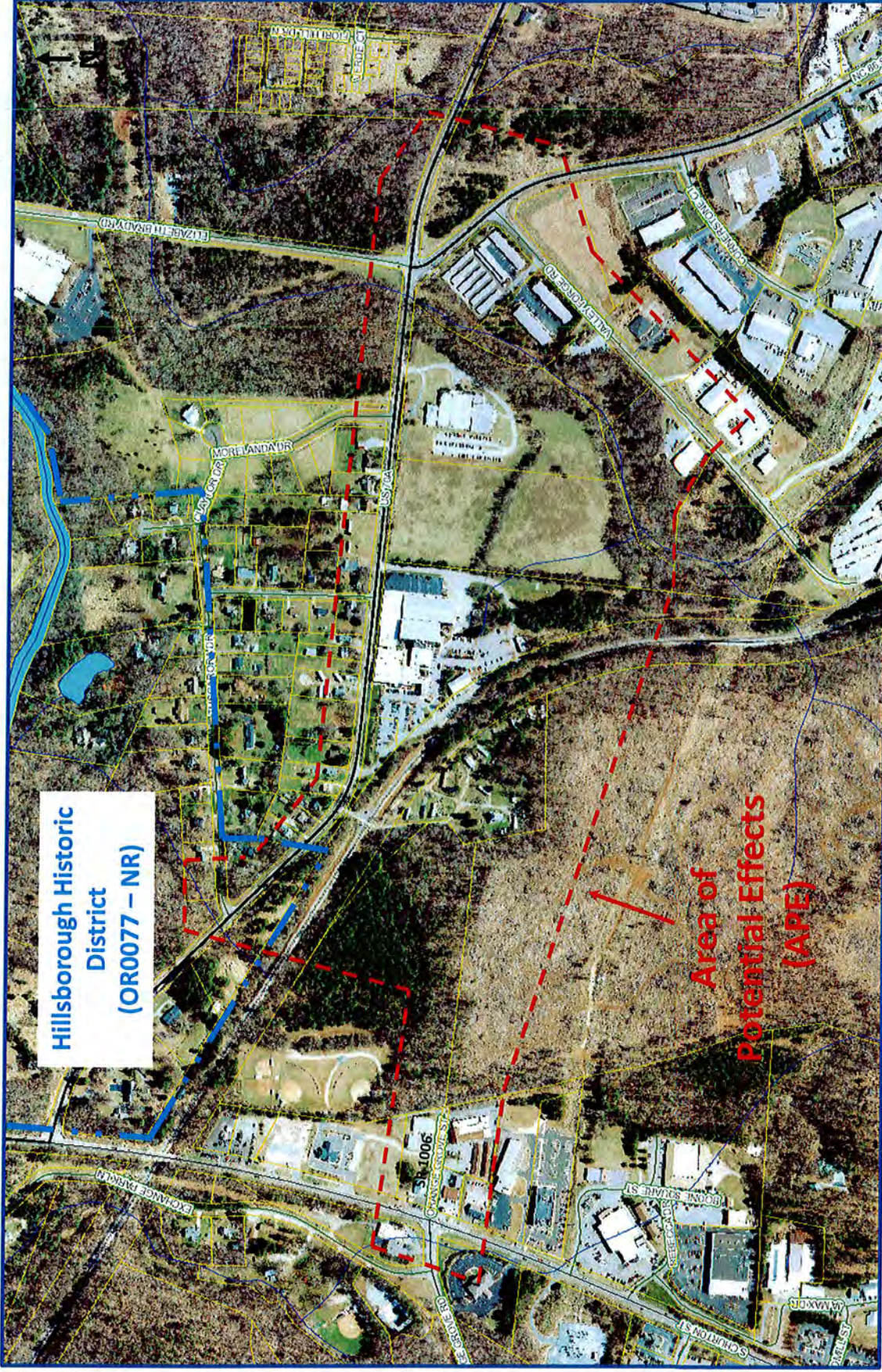
Property Name:	Hillsborough Historic District	Status:	NR
Survey Site No.:	OR0077	PIN:	Multiple
Effects			
<input checked="" type="checkbox"/> No Effect ALTS. 2, 4, 3 <input checked="" type="checkbox"/> No Adverse Effect ALT. 1 <input type="checkbox"/> Adverse Effect			



- U-5848
- U-5845
- Railroad
- Streets
- NWI Wetlands
- Streams
- Town of Hillsborough

Figure 1
Vicinity Map
 Project Nos. U-5845 and U-5848
 Hillsborough
 Orange County

U-5848, Tracking No. 16-09-0025



**Hillsborough Historic District
 District
 (OR0077 - NR)**

Area of Potential Effects (APE)

Area of Potential Effects (APE) - - - **U-5848, Orange County**
WBS No. 50237.1.1 **Base map: Current Orange County GIS, nts**

NCDOT – Historic Architecture
 July 2017
 Tracking No. 16-09-0025

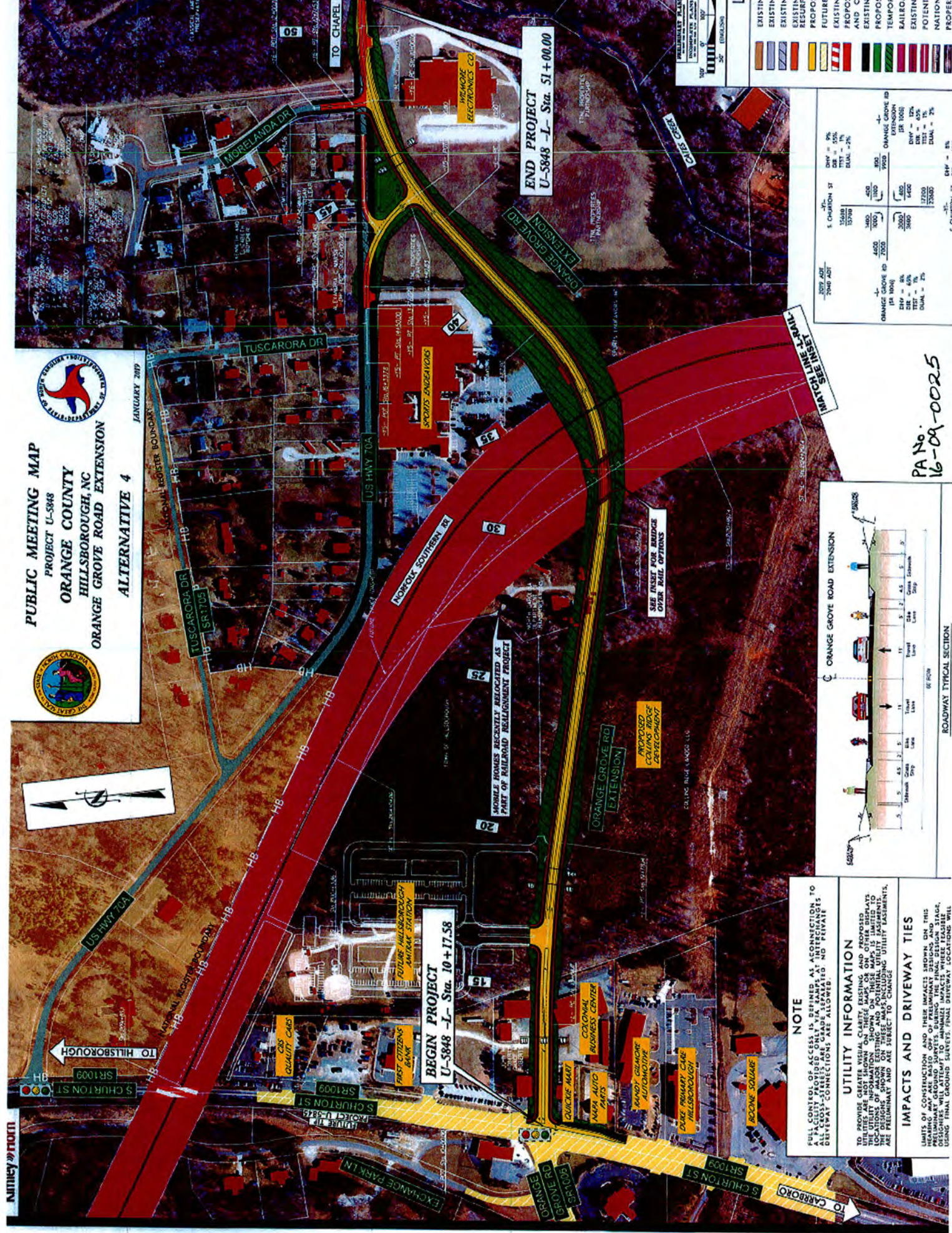
PUBLIC MEETING MAP
PROJECT U-5848
ORANGE COUNTY
HILLSBOROUGH, NC
ORANGE GROVE ROAD EXTENSION
ALTERNATIVE 4



JANUARY 2019



MINNEY & MORRIS



NOTE
 FULL CONTROL OF ACCESS IS DEFINED AS CONNECTION TO A FULLY DEVELOPED INTERCHANGE AT INTERCHANGES. FULLY DEVELOPED INTERCHANGES ARE ALLOWED. DRIVEWAY CONNECTIONS ARE ALLOWED.

UTILITY INFORMATION
 TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITY INFORMATION IS SHOWN ON THIS MAP. THE LOCATION OF MAJOR EXISTING AND POTENTIAL UTILITY FACILITIES ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

IMPACTS AND DRIVEWAY TIES
 LIMITS OF CONSTRUCTION AND THEIR IMPACTS BEYOND THE HEARING MAY BE MADE OFF OF PRELIMINARY DESIGN AND DESIGNERS WILL CONSIDER IMPACTS DURING THE FINAL DESIGN STAGE. USING FINAL GROUND SURVEYS, FINAL DRIVEWAY LOCATIONS WILL



PA No. 16-09-0025

ROADWAY TYPICAL SECTION



**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: **U-5848** County: **Orange**
 WBS No: **50237.1.1** Document: **EA**
 F.A. No: **na** Funding: State Federal

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

Project Description:

The project calls for SR 1006 (Orange Grove Road) to be extended along new location from the end of the existing road to US 70 Business in Orange County. The archaeological Area of Potential Effects (APE) for the project is defined as a 2,112-foot (643.74 m) long corridor running east from Orange Grove Road's intersection with SR 1009 (Churton Street) to US 70 Business. The corridor is approximately 100 feet (30.48 m) wide extending 50 feet (15.24 m) on either side of the newly proposed center line.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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.

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

The proposed Orange Grove Road extension project is located in southern half of the town of Hillsborough and south of the Eno River in Orange County, North Carolina. The project area is plotted near the western edge of the Hillsborough USGS 7.5' topographic quadrangle (Figure 1).

A map review and site file search was conducted at the Office of State Archaeology (OSA) on September 29, 2016. No previously recorded archaeological sites are identified within or adjacent to the APE. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2016), there are no known historic architectural resources within the APE that may yield intact archaeological deposits. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), and historic maps (North Carolina maps website) were examined for information on environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance. An archaeological field investigation was carried out on October 17, 2016, to help evaluate the project area.

The proposed Orange Grove Road extension runs roughly east to west along a gently sloping ridge (Figure 2). According to the USGS topographic map, the project crosses a small tributary of the Eno River; however, no drainageway was observed during the field investigation. The channel is likely further downslope to the north. The APE primarily consists of a forested property with urban development at the intersection with Churton Street in the west and the railroad to the east (Figure 3 and 4). Clear cutting for a proposed residential development has occurred just south of the APE. Pervious ground disturbance is light to moderate from soil erosion within the forest, but heavy at either end of the APE from modern development.

The USDA soil survey for Orange County reports that the APE is made up of Georgeville silt loam (GeB; GeC) and the Georgeville-Urban land complex (ChC) (see Figure 2). Georgeville series cover the forest and most of the project area. It is well drained with slope at 2 to 6 percent for GeB and 6 to 10 percent for GeC. Being well drained and dry, this soil has the potential of yielding archaeological sites. The Georgeville-Urban land complex is situated at the western end on developed properties. It contains areas where the original soils that have been cut, filled, graded, paved, or modified in some way that the original characteristics have been altered. These alterations cover up to two-thirds of the soil series. It is not likely a significant resource will be present on this series, and therefore did not require subsurface testing.

A review of the sites files at OSA shows numerous reviews and surveys within the vicinity of the project area. Most of the previous work was for proposed greensways, sewer and other utility lines, residential and commercial developments, and roads. Although this previous work has identified several sites in the Hillsborough region, none are within the currently defined APE as no work has been conducted on this property. Most known sites are reported along the Eno River and its tributaries. The historic sites are generally massed towards the center of town and north of the Eno, while prehistoric sites are found on ridges and terraces within the forested properties to the east and west of Churton Street in areas that are similar to the current project area. The nearest archaeological review was for the Collins Ridge tract, which is located just to the south of the APE and recently clear cut. OSA has recommended a reconnaissance and survey for this property (no ER# provided), but the archaeological investigations have yet to be carried out.

Several county and regional maps were inspected as well during the background review. The earliest map in which the project area could be determined was the George Tate and Theophilus Moore's 1891 *Map of Orange County* (Figure 5). This map illustrates roads with similar alignments to US 70 Business (identified as Fish Dam Road) and Exchange Park/Orange Grove Roads. The current alignment of Churton Street would not be established until the 1960s. The railroad is also shown, but it is drawn slightly to the south of its actual location. No other roads or structures are plotted along or near the

proposed extension. A more accurate picture of the regions was found on the 1918 *Soil Survey Map for Orange County* (Figure 6). Like the earlier map, the project location is void of features except for the railroad. Subsequent maps provide no new information. As a result, it is not likely for any significant historic features to be encountered within the APE.

The archaeological field investigation within the currently defined project area consisted of 13 shovel test placements (STPs) (see Figure 2). A surface inspection was not carried out due to very low visibility. STPs were placed a 30-m intervals along the center of the APE. No STPs were excavated in areas of obvious ground disturbance caused by urban development or the railroad, which were found at the eastern and western ends of the project area. The soil stratigraphy consisted of two strata. The upper layer is a shallow plowzone mixed with organic matter, the original top soil, and subsoil. This is a brown (7.5YR 4/4) or strong brown (7.5YR 4/6) silty clay loam that is between 5 and 20 cm (ca. 2 to 8 in) thick. It is followed by subsoil, which is a yellowish red (5YR 4/6) clay that extends at least 30 cm (ca. 12 in) below the surface. Only at the eastern end near the railroad was the upper layer completely removed, which yielded subsoil at the surface. No cultural material was recovered from any of the STPs.

The archaeological investigations for the proposed Orange Grove Road extension project in Orange County show that no significant sites are within the APE as all STPs were negative for cultural material. It appears soil erosion has made it very unlikely for intact significant archaeological deposits to be present. No further archaeological work is required for this project. However, additional work might be required should design plans change to encompass property outside of the currently defined APE.

SUPPORT DOCUMENTATION

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



C. Damon Jones
NCDOT ARCHAEOLOGIST

10/25/16

Date

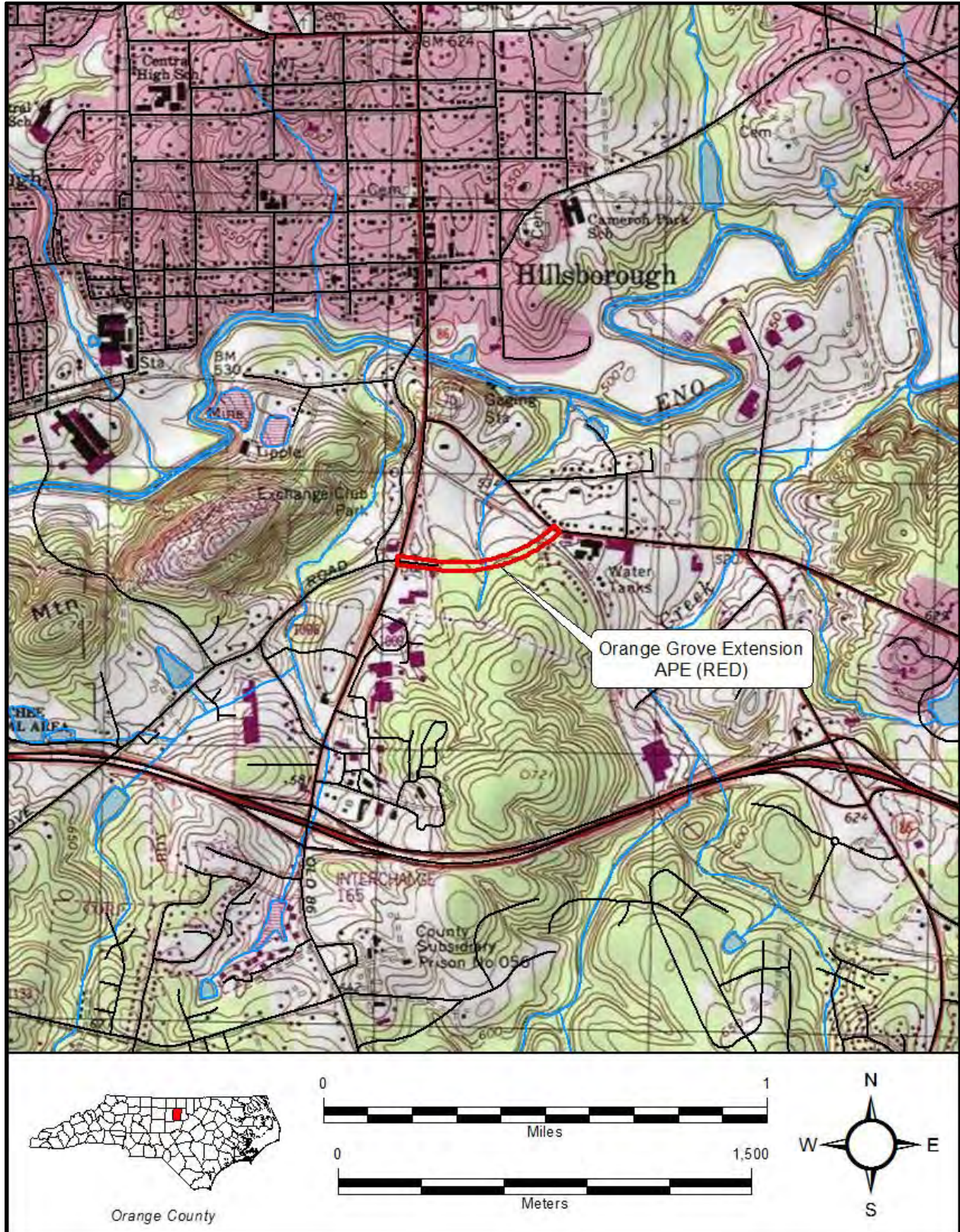


Figure 1. Topographic Setting of the Project Area, Hillsborough (1968; revised 1994), NC, USGS 7.5' Topographic Quadrangle.



Figure 2. Aerial photograph of the APE showing development, landforms, soils, and the STPs within and near the project area.



Figure 3. General View of the project area at the western end looking east.



Figure 4. General View of the project area at the eastern end looking west.



Figure 5. George Tate and Theophilus Moore's 1891 Map of Orange County showing the project area.

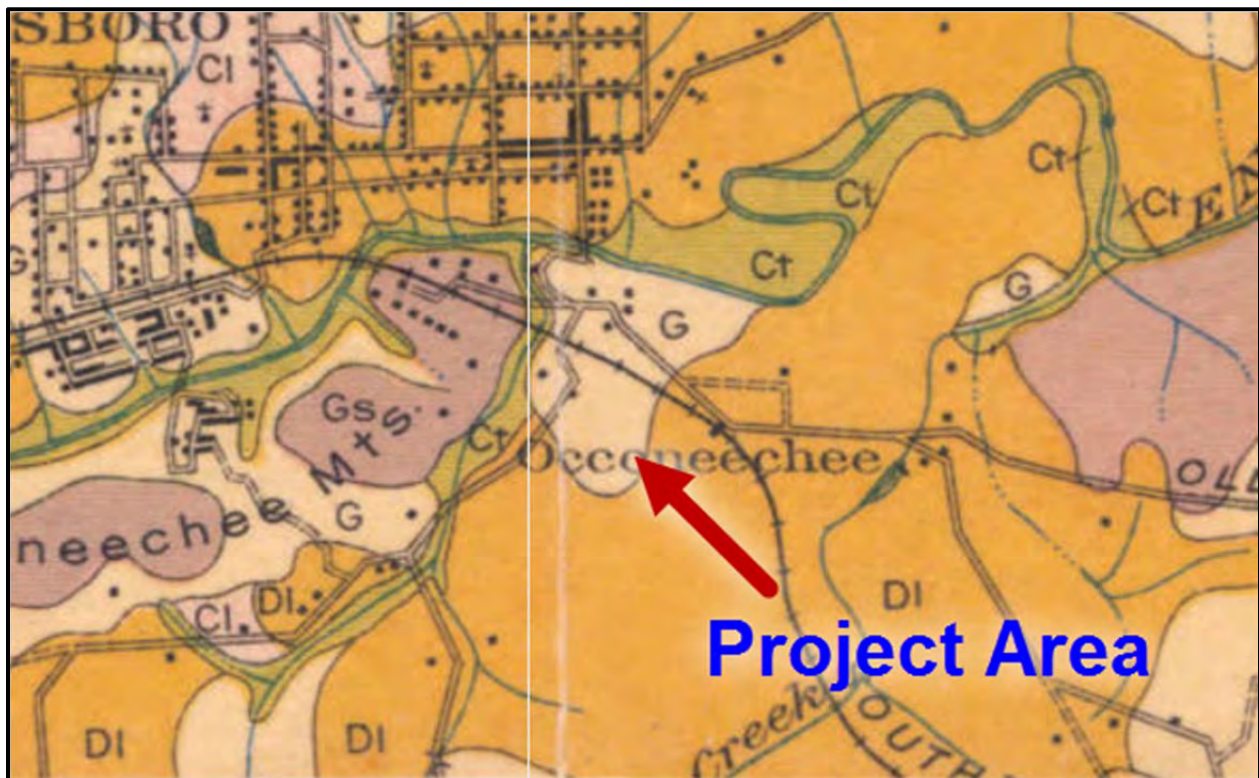


Figure 6. The 1918 Soil Survey Map of Orange County showing the location of the project area.

16-09-0025
Addendum

**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: **U-5848** County: **Orange**
 WBS No: 50237.1.1 Document: **EA**
 F.A. No: **na** Funding: State Federal

Federal Permit Required? Yes No Permit Type: **Possible NWP# 3 and/or 14**

Project Description:

The project calls for SR 1006 (Orange Grove Road) to be extended along new location from the end of the existing road to US 70 Business in Orange County. The original archaeological Area of Potential Effects (APE) for the project was defined as a 2,112-foot (643.74 m) long corridor running east from Orange Grove Road's intersection with SR 1009 (Churton Street) to US 70 Business. The corridor was approximately 100 feet (30.48 m) wide extending 50 feet (15.24 m) on either side of the newly proposed center line.

The APE addendum is for the proposed Alternative E alignment. It too will extend east from existing Orange Grove Road. This APE corridor will run for approximately 3,800 feet (1,158.24 m) to Valley Forge Road and then turn northeast to run for 1,400 feet (426.72 m) to US 70 Business. The Valley Forge segment will be along existing alignment until it crossing over NC 86 at which point it will be on new location. The alternative alignment remains approximately 100 feet (30.48 m) wide extending 50 feet (15.24 m) on either side of the newly proposed center line

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

NC DOT has conducted an archaeological survey and evaluation for the proposed Orange Grove Road Alternative E alignment in Orange County, North Carolina (TIP U-5848). The project area is plotted near the western edge of the Hillsborough USGS 7.5' topographic quadrangle (Figure 1).

Background Research

A map review and site files search was conducted at the Office of State Archaeology (OSA) on August 23, 2017. No previously recorded archaeological sites are identified within or adjacent to the APE, but numerous reviews and surveys are within the vicinity of the project area. Most of the previous work was for proposed greenways, sewer and other utility lines, residential and commercial developments, and roads. Excluding the original archaeological survey for U-5848, one investigation has been conducted within a portion of the proposed alternative (Figure 2a and b). The Elizabeth Brady Road Extension project (TIP U-3808) was carried out in 2008 by TRC (Ruggiero 2008). This project overlaps with the current project along the new location east of NC 86. Seven nearby sites (31OR586, 31OR587, 31OR588, 31OR590, 31OR591, 31OR605, and 31OR606) were recorded during the U-3808 investigations. All were recommended ineligible for the National Register except for 31OR591 and 31OR606. Site 31OR591 was determined eligible, and 31OR606 remains unassessed. Neither of these two sites will be affected by the current project. In addition, OSA recommended a reconnaissance and survey for the Collins Ridge tract, which is located just to the south of the APE and recently clear cut (no ER# provided). This archaeological investigation has yet to be carried out. Due to a setting similar found at previously recorded sites in the region, it was assumed the current project may impact unknown archaeological resources.

According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2017), there are no known historic architectural resources within the APE that may yield intact archaeological deposits.

Several county and regional maps were inspected as well during the background review. The earliest map in which the project area could be determined was the George Tate and Theophilus Moore's 1891 *Map of Orange County* (Figure 3). This map illustrates roads with similar alignments to US 70 Business (identified as Fish Dam Road) and Exchange Park/Orange Grove Roads. The current alignment of Churton Street and NC 86 would not be established until the 1960s, but the section of NC 86 within the current APE followed the former Raleigh Road alignment. The railroad is also shown, but it is drawn slightly to the south of its actual location. No other roads or structures are plotted along or near the proposed extension. A more accurate picture of the regions was found on the 1918 *Soil Map for Orange County* (Figure 4). Like the earlier map, the project location is void of features except for the railroad and a mill dam to the north. This mill dam is archaeological site 31OR606, which is not to be impacted. Subsequent maps provide no new information. As a result, it is not likely for any significant historic features to be encountered within the APE.

According to the USDA soil survey map for Orange County, the APE is made up of Georgeville silt loam (GeB; GeC) and the Georgeville-Urban land complex (ChC) (see Figure 2a and b) (Dunn 1977). Georgeville series cover most of the project area. It is well drained with slope at 2 to 6 percent for GeB and 6 to 10 percent for GeC. Being well drained and dry, this soil has the potential of yielding archaeological sites. The Georgeville-Urban land complex (GhC) is situated at the western end on the developed properties. It contains areas where the original soils that have been cut, filled, graded, paved, or modified in some way that the original characteristics have been altered. These alterations cover up to two-thirds of the soil series. It is not likely a significant resource will be present on this series, and therefore require no subsurface testing.

Fieldwork Results

The archaeological field survey for the Alternative E alignment was carried out on November 20 and 22, 2017. This included systematic shovel testing at 30-meter (ca. 98.43 feet) intervals along the new APE centerline. A surface inspection could not be performed due to low visibility. No shovel testing occurred in areas with obvious disturbance such as fill or grading, on water logged (hydric) soils, or along impervious surfaces such as a pavement or at existing structures. Shovel testing was also not carried out in areas that were previously investigated such as at the western end which was covered during the first investigation for the Orange Grove Road extension and the area east of NC 86 which was tested during the Elizabeth Brady Road Extension project. A total of 22 shovel tests (STs) were initially excavated (see Figure 2a and b). Two were positive for prehistoric materials and were recorded as archaeological site 31OR677. An additional 15 ST were excavated during testing and delineation of this site at a shorter interval of 15-m (ca. 49.21 feet).

The proposed alternative to the Orange Grove Road extension runs roughly east to west mostly along gently sloping ridges; however, a narrow floodplain is crossed at Cates Creek at the eastern end (see Figure 2a and b). Waterways within the APE consist of two tributaries to the Eno River. The first is a seasonal drainage at the western end, while the second is the above mentioned Cates Creek near Valley Forge Road. These waterways are part of the Neuse drainage basin. The APE primarily consists of forested properties. However, urban development is present at the intersection with Churton Street in the west and along sections of Valley Forge Road in the east (Figures 5 and 6). Residential properties are also located near the center of the project area just west of the proposed railroad crossing. These properties are mostly abandon mobile homes and one house. Other disturbances include clear cutting for a proposed residential development south of the APE, gravel roads, a swear line adjacent to Cates Creek, the railroad grade, push piles, an abandon lumber storage area next to the railroad, moderate to heavy soil erosion throughout, buried utilities along Valley Forge Road, and landscape modifications (cut/fill) for Valley Forge Road and the businesses along it.

The soil stratigraphy consisted of two strata. Throughout most of the APE, the upper layer is a shallow plowzone mixed with organic matter, the original top soil, and subsoil. This is a brown (7.5YR 4/4) or strong brown (7.5YR 4/6) silty clay loam that is between 5 and 20 cm (ca. 2 to 8 in) thick. It is followed by subsoil, which is a yellowish red (5YR 4/6) clay that extends at least 30 cm (ca. 12 in) below the surface. Only at site 31OR677 was there a change in the soil make-up. The upper layer is a thin plowzone that is 10 to 15 cm (ca. 4 to 6 in) thick. It is a dark red (2.5TR 3/6) clay loam mixed with subsoil and organic matter. It is followed by subsoil, which is also dark red but clay soil.

31OR677

Site 31OR677 is a low-density prehistoric lithic scatter situated on a gently sloping ridge north and west of Cates Creek in a hay field (Figures 7 and 8). The site was found during ST excavations as previously mentioned. Although the vegetation was cut, surface visibility was poor at the time of the investigation. STs were placed at 15-meter intervals to surround the original positives. This help to determine the extent of the site and to investigate for any possible intact deposits. In all, 18 STs were excavated with four yielding prehistoric artifacts. The site covers approximately 3,400 square meters and is bounded by negative STs on all sides. However, it would not be unexpected for the site to extend further north along the landform outside of the APE. Extension of the site to the south, east, and west are unlikely since the landform slopes down onto wet soils associated with the floodplain. These areas were tested with negative results.

Soil erosion is heavy within and around the site with a thin plowzone composed of subsoil and organic matter overlying subsoil. Although the USDA soil survey shows the site and landform as being located on Georgeville silt loam (GeC), the testing results did not confirm this. It does not appear that any original top

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soil is present in the plowzone's matrix. The site is deflated from natural and man-made erosion. As a result, intact subsurface deposits are not expected. The soil survey also fails to report hydric soils found in the adjacent floodplain.

A total of eight lithic artifacts were recovered (Table 1). All were meta-volcanic debitage located in the plowzone in the first 10 cm (ca. 4 in). No diagnostic tools were found, and no ware was seen on the debitage.

Site 31OR677 lacks the potential to yield important information about regional prehistoric occupations. The artifacts were recovered in low numbers in a disturbed context with no intact deposits present or likely to be found. The site also could not be dated to any particular prehistoric period. Site 31OR677 is recommended not eligible for the National Register, and no further work is recommended within the APE.

Summary and Recommendations

The archeological survey for the proposed Orange Grove Road Alternative E alignment in Orange County confirms that the APE contains no significant archaeological resources. Most of the APE contains no resources as testing was negative, but site 31OR677 was identified on a ridge near the eastern end. After completion of the current investigations, 31OR677 within the APE is not eligible for the National Register. As a result, no further archaeological work is recommended for this road project. However, if design plans change to impact areas outside of the APE, then further archaeological work will be required.

SUPPORT DOCUMENTATION

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



C. Damon Jones
NCDOT ARCHAEOLOGIST

12/30/17

Date

REFERENCES CITED

Dunn, James

1977 *Soil Survey of Orange County, North Carolina.* United States Department of Agriculture, Soil Conservation Services in cooperation with North Carolina Agricultural Experiment Station and Orange County Board of Commissioners.

HPOWEB

2017 North Carolina State Historic Preservation Office GIS Web Service.
<http://gisNCDCCR.gov/hpoweb/>. Accessed August 28, 2017.

Hearn, W. Edward, Earl Vanatta, Lonn Brinkley, and Samuel Davidson

1918 *Soil Map for Orange County, North Carolina.* U.S. Department of Agriculture, Government Printing Office, Washington D.C. On file at North Carolina Collections, University of North Carolina, Chapel Hill.

Ruggiero, Dino

2008 *Archaeological Survey and Evaluation for the Elizabeth Brady Road Extension Orange County, North Carolina.* TRC Garrow Associates Inc., Chapel Hill, North Carolina. Submitted to NCDOT, Raleigh, North Carolina.

Tate, George and Theophilus Moore

1891 *Map of Orange County, North Carolina.* George W. Tate. Bingham School. On file at North Carolina Collections, University of North Carolina, Chapel Hill.

United States Geological Survey (USGS)

1968 Hillsborough, North Carolina 7.5 minute quadrangle map. Washington, D.C. Revised 1994.

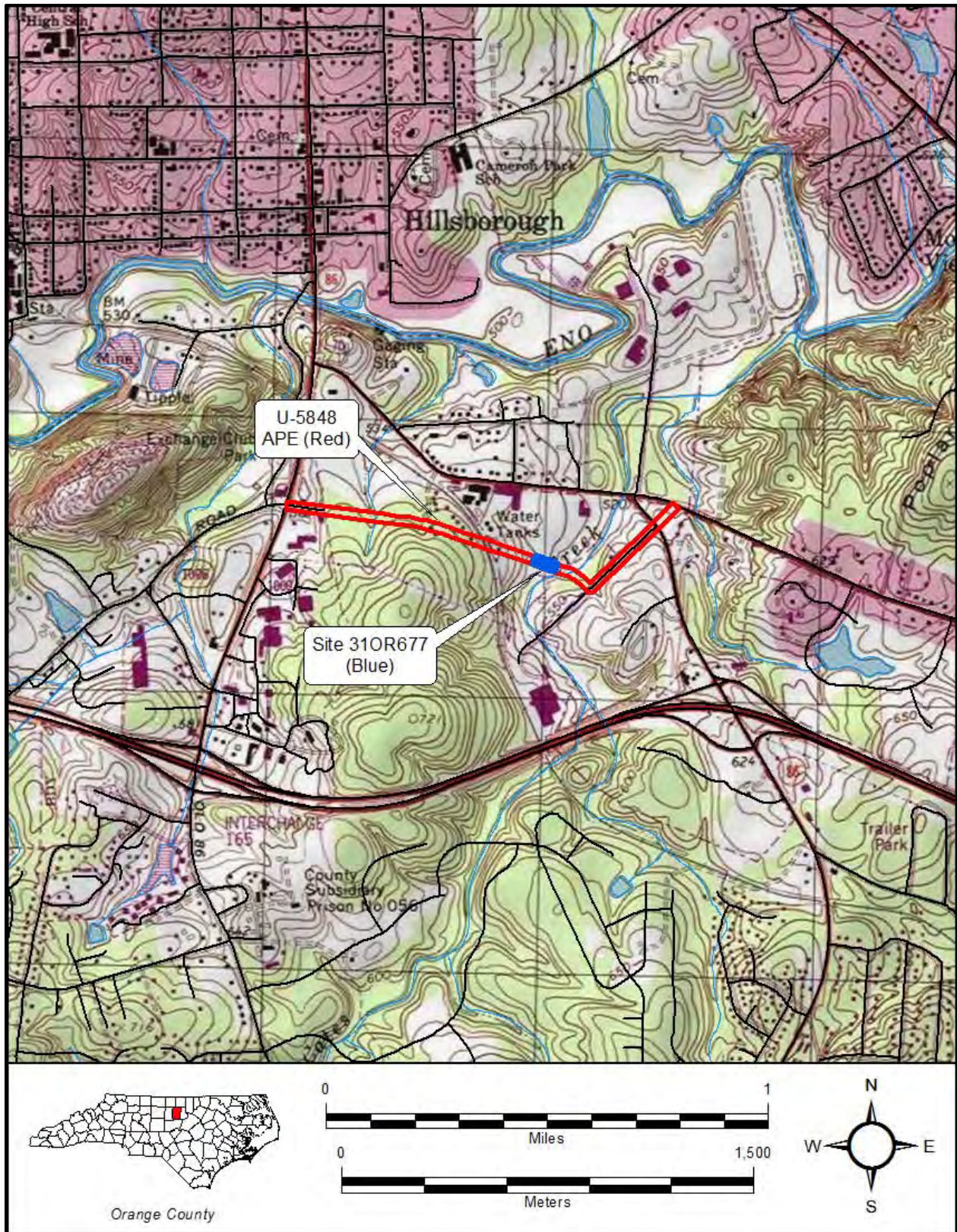


Figure 1. Topographic Setting of the Project Area, Hillsborough (1968; revised 1994), NC, USGS 7.5' Topographic Quadrangle.

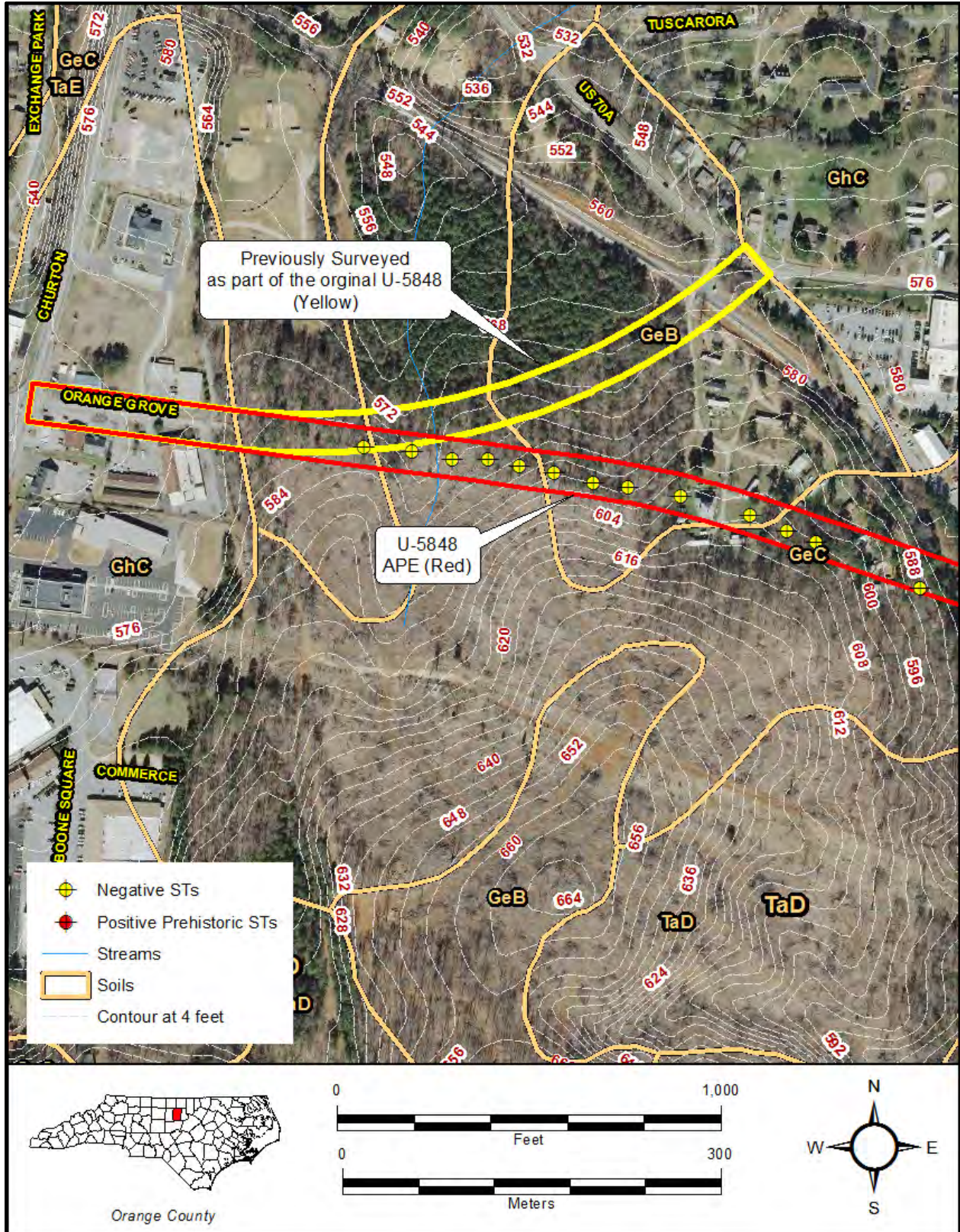


Figure 2a. Aerial photograph of the western half of the APE showing development, landforms, soils, STs, and previously surveyed projects.

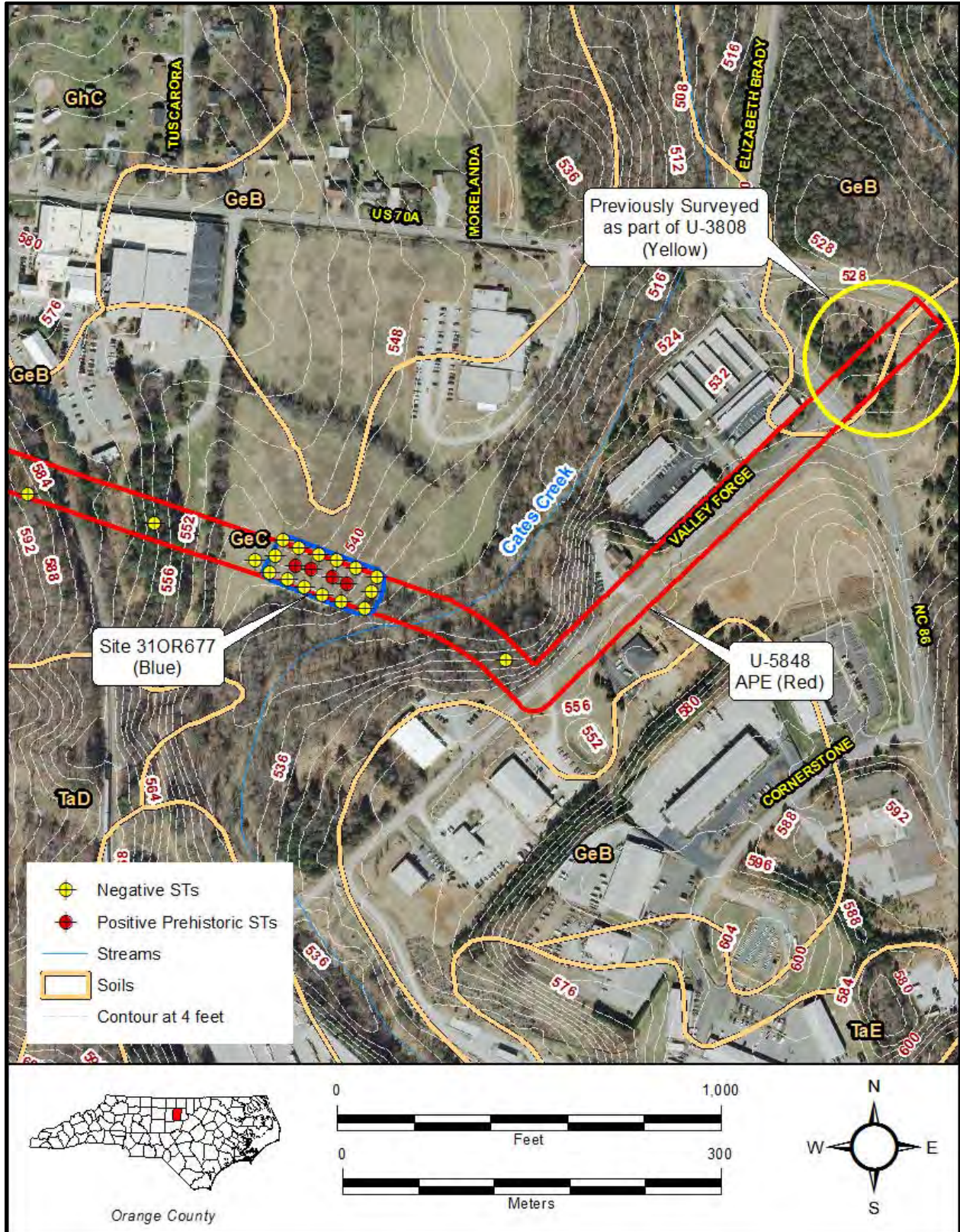


Figure 2b. Aerial photograph of the eastern half of the APE showing development, landforms, soils, STs, previously surveyed projects, and site 31OR677.



Figure 3. George Tate and Theophilus Moore's 1891 *Map of Orange County* showing the project area.

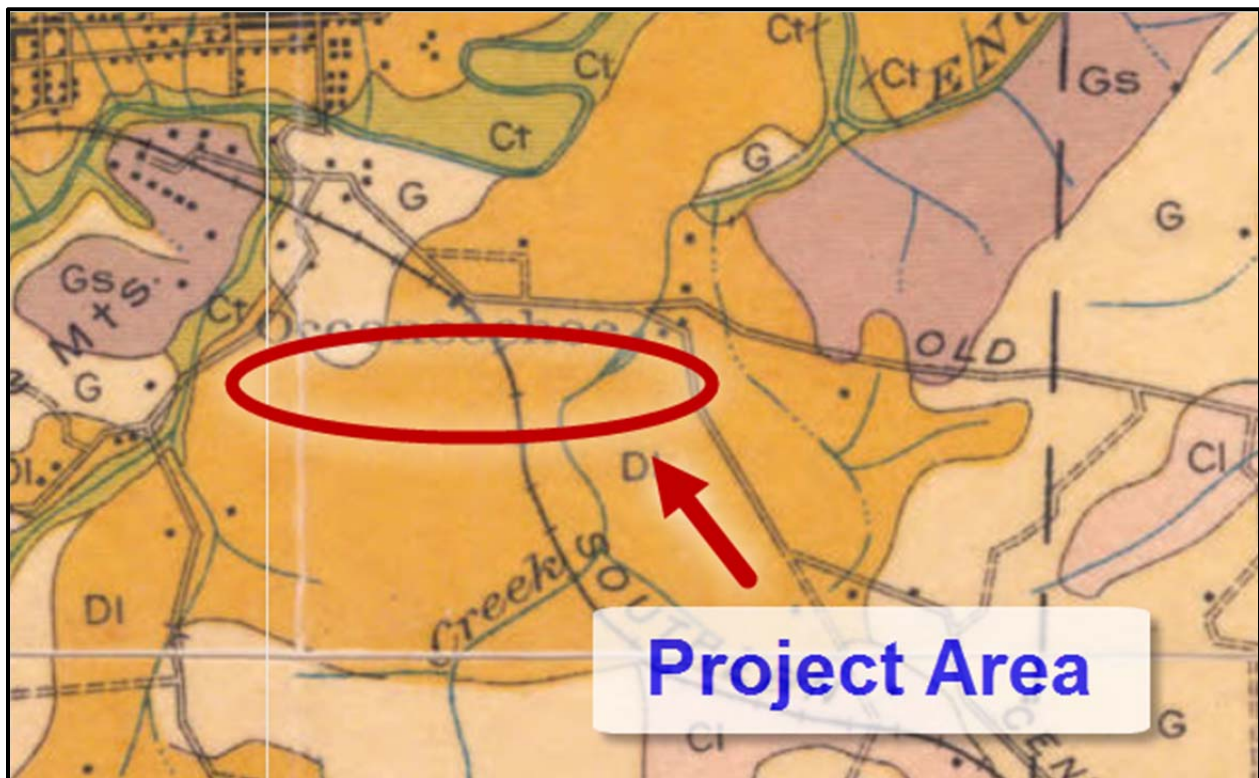


Figure 4. The 1918 *Soil Map for Orange County* showing the project area.



Figure 5. General View of the project area at the western end near the Churton Street intersection, looking east.



Figure 6. General View of the project area at the eastern end along Valley Forge Road, looking east.

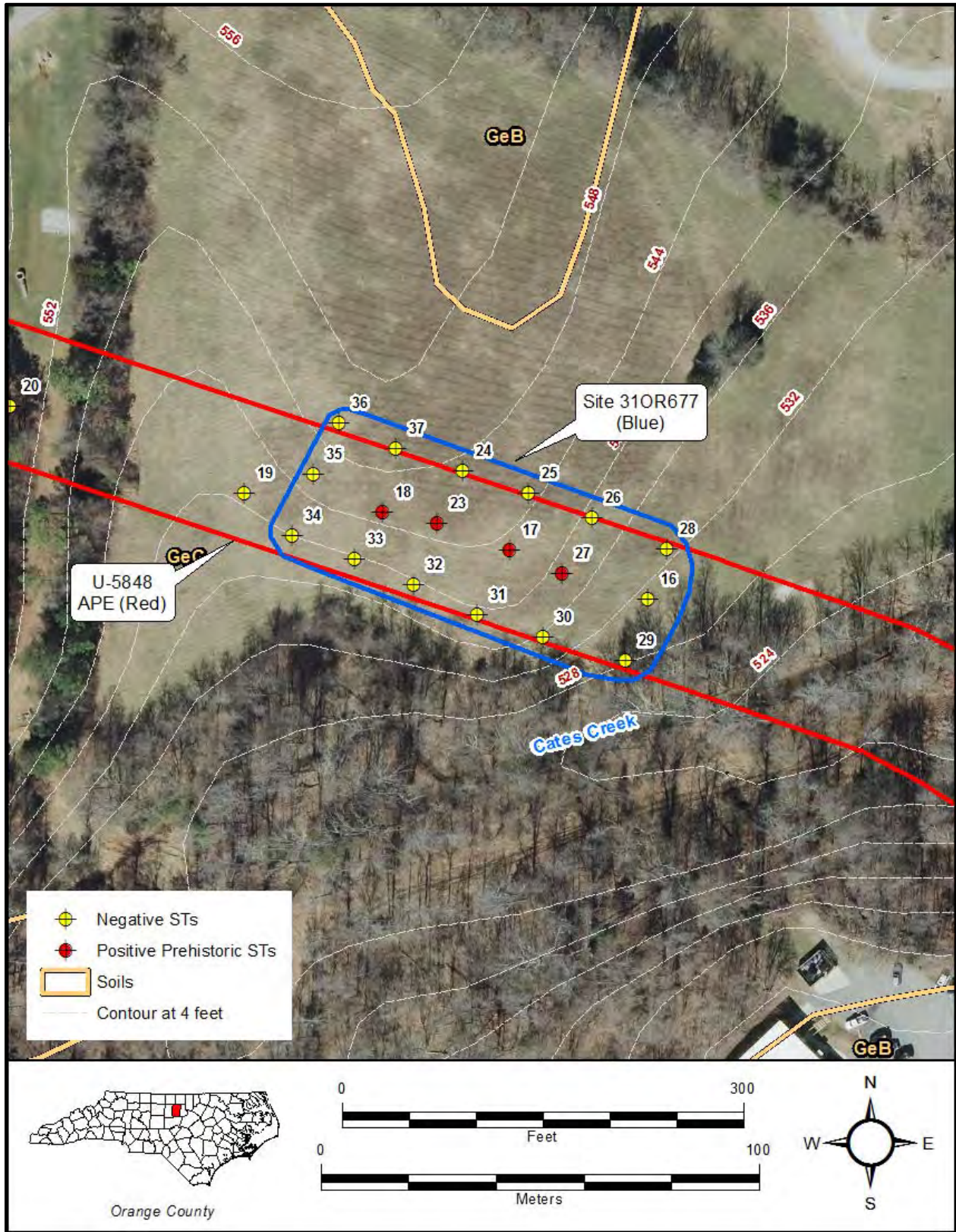


Figure 7. Site map of 31OR677.



Figure 8. General View of Site 31OR677, looking south.

Table 1. Site 31RW268 Artifact Inventory.

Bag	Prov	Strat	Depth	Artifact	Description	Qty
1	ST 17	I	0-10	Debitage	Meta-Volcanic; Tertiary Flakes	2
2	ST 18	I	0-10	Debitage	Meta-Volcanic; Tertiary Flakes	2
3	ST 23	I	0-10	Debitage	Meta-Volcanic; Tertiary Flakes	3
4	ST 27	I	0-10	Debitage	Meta-Volcanic; Tertiary Flake	1
Total						8



**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: **U-5848** County: **Orange**
 WBS No: 50237.1.1 Document: **EA**
 F.A. No: **na** Funding: State Federal
 Federal Permit Required? Yes No Permit Type: **USACE**

Project Description:

The project calls for SR 1006 (Orange Grove Road) to be extended along new location from the end of the existing road to US 70 Business in Orange County. The archaeological Area of Potential Effects (APE) for the project's first alternative was defined as a 2,112-foot (643.74 m) long corridor running east from Orange Grove Road's intersection with SR 1009 (Churton Street) to US 70 Business. The corridor was approximately 100 feet (30.48 m) wide extending 50 feet (15.24 m) on either side of the newly proposed centerline. The second APE was for the proposed Alternative E Alignment. It ran for approximately 3,800 feet (1,158.24 m) to Valley Forge Road and then turn northeast to run for 1,400 feet (426.72 m) to US 70 Business. The Valley Forge segment followed an existing road alignment until it crossed NC 86. After which, it was on new location. The Alternative E alignment remained approximately 100 feet wide extending 50 feet on either side of the newly proposed centerline.

The third and current APE is for the proposed Alternative 4 alignment. This APE corridor runs east from Orange Grove Road for approximately 3,600 feet (1,097.28 m) to US 70 Business. The APE west of the railroad is generally 100 feet wide extending 50 feet on either side of the newly proposed centerline. The APE expands to approximately 250 feet (76.20 m) wide as it crosses the railroad and runs for approximately 700 feet (213.36 m) along US 70 Business to encompass the newly proposed intersection.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

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.

SUMMARY OF CULTURAL RESOURCES REVIEW

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

NC DOT has conducted an archaeological survey and evaluation for the proposed Orange Grove Road Alternative 4 alignment in Orange County, North Carolina (TIP U-5848). The project area is plotted near the western edge of the Hillsborough USGS 7.5' topographic quadrangle (Figure 1). Two other alternatives for U-5848 were reviewed in 2016 and 2017 with "No National Register of Historic Places Eligible or Listed Archaeological Sites Present" forms submitted (Jones 2016, 2017).

Background Research

A site files search was originally conducted at the Office of State Archaeology (OSA) on August 23, 2017. A follow up for Alternative 4 was carried out on October 16, 2018. No previously recorded archaeological sites are identified within or adjacent to the APE, but numerous reviews and surveys are within the vicinity of the project area. This information remains mostly unchanged since the first review. However, the Collins Ridge Development survey has been completed and submitted to OSA (Russ 2015). This investigation consisted of judgmental shovel tests along high probability landforms just south of the current project area. No archaeological resources were identified. Also, the past survey for U-5848 along the Alternative E alignment identified precontact site 31OR677 (Jones 2017). This lithic scatter is located along a ridge that is also crossed by the eastern end of the Alternative 4 alignment. The site is situated approximately 350 feet (106.68 m) south of the currently defined APE. Due to a familiar setting found at other known sites in the region and the proximity of 31OR677, it was assumed the current project may impact unknown archaeological resources.

According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2018), there are no known historic architectural resources within the APE that may yield intact archaeological deposits.

A new map review was not conducted, since previous inspections revealed no significant information concerning the project's location.

According to the USDA soil survey map for Orange County, the APE is made up of Georgeville silt loam (GeB; GeC) and the Georgeville-Urban land complex (ChC) (USDA NRCS 2018). Georgeville series cover most of the project area. It is well drained with slope at 2 to 6 percent for GeB and 6 to 10 percent for GeC. Being well drained and dry, this soil has the potential of yielding archaeological sites. The Georgeville-Urban land complex (GhC) is situated at the western end on the developed properties. It contains areas where the original soils that have been cut, filled, graded, paved, or modified in some way that the original characteristics have been altered. These alterations cover up to two-thirds of the soil series. It is not likely a significant resource will be present on this series, and therefore require no subsurface testing.

Fieldwork Results

The archaeological field survey for the Alternative 4 alignment was carried out on November 19, 2018. This included systematic shovel testing at 30- to 15-meter (ca. 98.43 to 49.21 feet) intervals within the amended APE. A surface inspection could not be performed due to low visibility. No shovel testing occurred in areas with obvious ground disturbance or along impervious surfaces such as pavement or at existing structures. Shovel testing was also not carried out in areas that were investigated during the two previous surveys for U-5848. A total of 19 new shovel tests (STs) were excavated (Figure 2). None of which were positive for cultural material.

The proposed alternative to the Orange Grove Road extension runs roughly east to west mostly along gently sloping ridges (see Figure 2). Waterways within the APE are seasonal, but a storm drainage ditch is located just behind the Sports Endeavors complex (Figure 3). All water in the area drains north into the Eno River, which is part of the Neuse drainage basin. The eastern end of the APE is located in an open field (Figure 4). This is where most of the current subsurface testing was carried out with 14 STs excavated. No new tests were placed in the area south of the Sports Endeavors complex between the railroad and the field. This area is heavily disturbed with several large push piles and impervious surfaces (Figure 5). The location was once part of a lumber mill. Also, no STs were excavated next to the railroad due to previously construction activities. Finally, five STs were dug west of the railroad in a former residential area. All structures, which included several mobile homes and one house, have been removed since the previous investigation (Figure 6). Most shovel tests at this located showed disturbed soils with several trash pile found throughout. No additional STs were placed further west. This section of the project area was tested during the previous two investigations and is now partially destroyed by construction activities related to the Collins Ridge Development project (Figure 7).

The undisturbed shovel tested consists of two soil strata. The upper layer is a shallow plowzone mixed with organic matter, the original top soil, and subsoil. This is a brown (7.5YR 4/4) or reddish brown (5YR 4/4) silty clay loam that is between 15 and 30 cm (ca. 6 to 12 in) thick. It is followed by subsoil, which is a yellowish red (5YR 4/6) clay that extends at least 40 cm (ca. 16 in) below the surface.

Summary and Recommendations

The archeological survey for the proposed Orange Grove Road Alternative 4 alignment in Orange County confirms that the APE contains no significant archaeological resources. All subsurface tests were negative as well as shovels tests from previous surveys within the newly defined APE. No further archaeological work is recommended for this road project. However, if design plans change to impact areas outside of the APE, then further archaeological work will be required.

SUPPORT DOCUMENTATION

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

Signed:



C. Damon Jones
NCDOT ARCHAEOLOGIST

11/20/18

Date

REFERENCES CITED**HPOWEB**

2018 North Carolina State Historic Preservation Office GIS Web Service.
<http://gisNCDCR.gov/hpoweb/>. Accessed October 16, 2018.

Jones, C. Damon

2016 PA 16-09-0025, No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form, U-5848, Orange County. In *Programmatic Agreement for Minor Transportation Projects Annual Report for Review Year 2016-2017, Multi-County, North Carolina*. North Carolina Department of Transportation, Raleigh.

2017 PA 16-09-0025 Addendum, No National Register of Historic Places Eligible or Listed Archaeological Sites Present Form, U-5848, Orange County. In *Programmatic Agreement for Minor Transportation Projects Annual Report for Review Year 2017-2018, Multi-County, North Carolina*. North Carolina Department of Transportation, Raleigh.

Russ, Terri

2015 *Reconnaissance Archaeological Investigation, Collins Ridge, Hillsborough, Orange County, North Carolina*. Environmental Services, Inc., Raleigh, North Carolina.

United States Department of Agriculture Natural Resources Conservation Services (USDA NRCS)

2018 Orange County Soil Survey. Available online at
<http://webosilsurvey.nrcs.usda.gov/app/>. Accessed November 20, 2018.

United States Geological Survey (USGS)

2013 Hillsborough, North Carolina 7.5 minute quadrangle map.

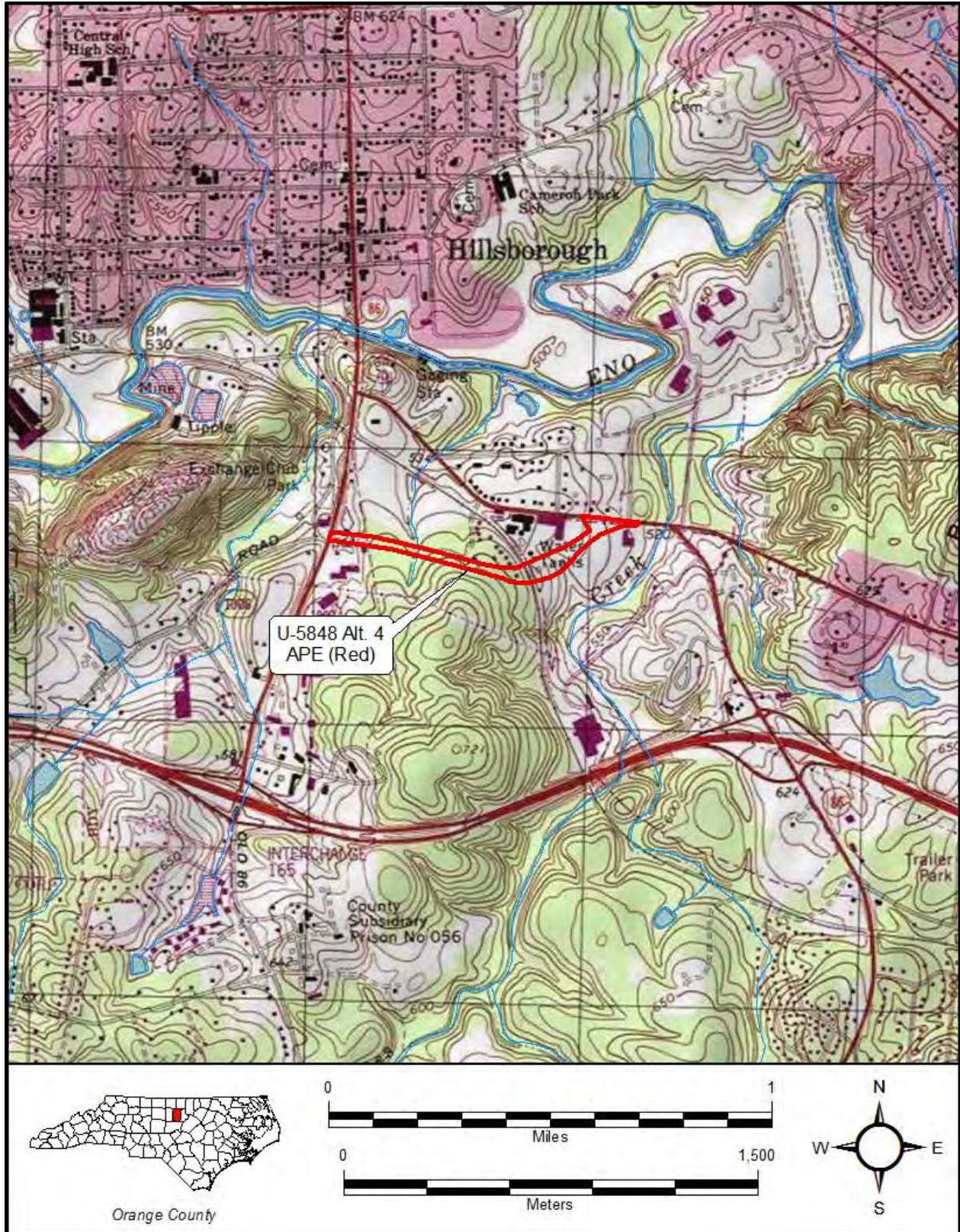


Figure 1. Topographic Setting of the Project Area, Hillsborough (2013), NC, USGS 7.5' Topographic Quadrangle.

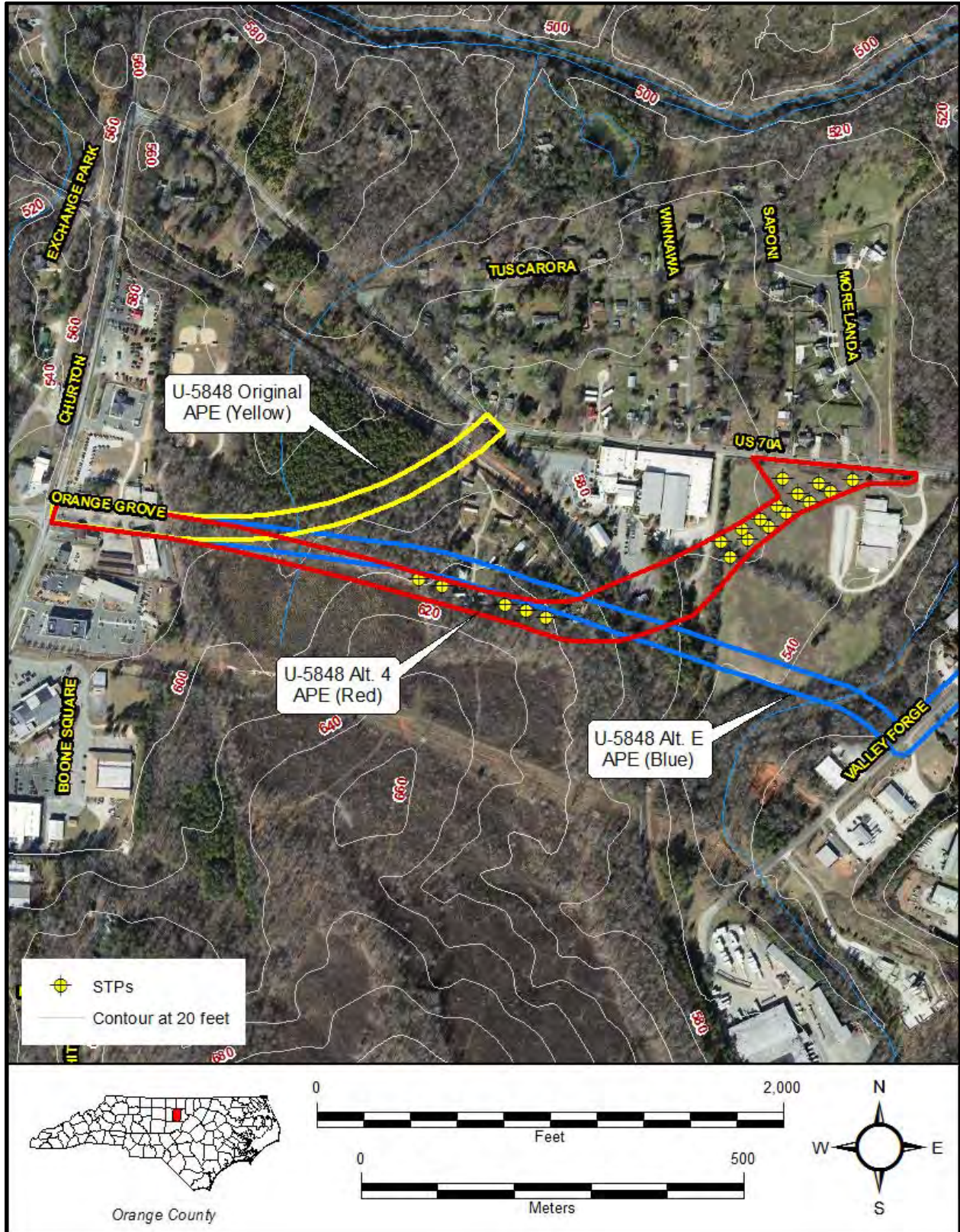


Figure 2. Aerial photograph of the APE showing development, landforms, STs, and previously surveyed U-5848 project areas.



Figure 3. General View of storm drainage ditch disturbance within the APE, looking southwest.



Figure 4. General View of field at the eastern end of the project area, looking northeast.



Figure 5. General View south of the Sports Endeavors complex showing push pile and shed, looking east.



Figure 6. General View of the abandon residential properties west of the railroad, looking west.



Figure 7. General View of construction activities relating to the Collins Ridge Development project adjacent to U-5848, looking west.

**RESOLUTION TO MODIFY THE 2018-2027 TRANSPORTATION
IMPROVEMENT PROGRAM FOR THE DURHAM-CHAPEL HILL-CARRBORO
METROPOLITAN PLANNING AREA**

**AMENDMENT #11
April 10, 2019**

A motion was made by MPO Board Member NICHOLAS PARKER and seconded by MPO Board Member ELLEN ROCKFORD for the adoption of the following resolution, and upon being put to a vote, was duly adopted.

WHEREAS, the Transportation Improvement Program (TIP) is a staged multiple year listing of all federally funded transportation projects scheduled for implementation within the Durham-Chapel Hill-Carrboro Metropolitan Planning Area which have been selected from a priority list of projects; and

WHEREAS, the document provides the mechanism for official endorsement of the program of projects by the MPO Board; and

WHEREAS, the inclusion of the TIP in the transportation planning process was first mandated by regulations issued jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and no project within the planning area will be approved for funding by these federal agencies unless it appears in the officially adopted TIP; and

WHEREAS, the procedures for developing the TIP have been modified in accordance with certain provisions of the MAP-21 Federal Transportation Act, Fixing America's Surface Transportation (FAST) Act, and guidance provided by the State; and

WHEREAS, projects listed in the TIP are also included in the State TIP (STIP) and balanced against anticipated revenues as identified in both the TIP and the STIP; and

WHEREAS, the North Carolina Department of Transportation and the MPO Board have determined it to be in the best interest of the Urban Area to amend the FY 2018-2027 Transportation Improvement Program as described in the attached sheets; and

WHEREAS, the United States Environmental Protection Agency Designated the DCHC MPO from nonattainment to attainment under the prior 1997 Ozone Standard on December 26, 2007; and

WHEREAS, the DCHC MPO certifies that this TIP amendment is consistent with the intent of the DCHC MPO 2040 Metropolitan Transportation Plan (MTP); and

WHEREAS, in accordance with 23 CFR 450.326 (d), the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets; and

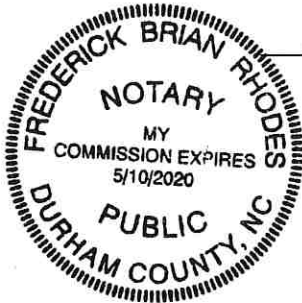
BE IT THEREFORE RESOLVED that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Board hereby approves Amendment #11 to the FY 2018-2027 Transportation Improvement Program of the Durham-Chapel Hill-Carrboro Urban Area, as approved by the Board on April 10, 2019, and as described in the "FY 2018-2027 TIP Amendment #11 Summary Sheet" on this, the 10th day of April, 2019.

Damon Seils
Damon Seils, MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: April 10, 2019



Frederick Brian Rhodes
Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

TOWN OF HILLSBOROUGH

Resolution in Support of the No Build Alternative for U-5848

- WHEREAS the town submitted a request to the Department of Transportation through the Durham Chapel Hill Carrboro Metropolitan Planning Organization for a new road to be constructed connecting Orange Grove Road to US 70 A to improve connectivity in the southern portion of Hillsborough, and
WHEREAS this project was supported and funded in the FY18-27 Transportation Improvement Plan with right of way acquisition in 2021 and construction in 2023, and
WHEREAS three alignments were presented at a public meeting in March 2018 to limited support and the town asked for a fourth alternative with specific characteristics, and
WHEREAS the Department developed a fourth alternative at the town's request and presented it along with other options at a public meeting in January 2019, and
WHEREAS the fourth alternative did provide the intended roadway connection but it significantly impacted the property and operations of two important business enterprises in town, and
WHEREAS none of the alternatives presented adequately addressed pedestrian and bicycle access into downtown from the funded passenger rail station to be developed in the vicinity of Orange Grove Road and none of the alternatives improve traffic congestion in areas that are of concern to the town, and
WHEREAS through the alternative development process the town refined its interests and concerns in this area of town and the project study area and scope are no longer adequate.

NOW, THEREFORE BE IT RESOLVED by the Hillsborough Town Board of Commissioners that the Town of Hillsborough:

- 1) Only supports the No Build Option for Orange Grove Road Extension, U-5848
2) Will be working to remove the project from Transportation Improvement Plan as well as local and regional transportation plans, and
3) Anticipates working closely NCDOT and the MPO to develop new projects to improve vehicle accessibility in southern Hillsborough and pedestrian connectivity from the train station to downtown and will submit any identified projects for funding as appropriate.



Attest: Katherine M. Cathey, Town Clerk

Tom Stevens, Mayor

3/11/19 Date