

# Appendix F-3: Historic Architectural Assessment of Effects Technical Report

## Durham-Orange Light Rail Transit Project



*Connecting all points of the Triangle*

Report Prepared by New South Associates, Inc.  
Mary Beth Reed – Principal Investigator  
Ellen Turco – Historian and Co-Author  
Scott Morris – Historian and Co-Author  
Jackie Tyson – Historian and Co-Author

Reviewed by Josh Fletcher, RPA –  
Cultural Resources Specialist

**October 2018**

## Table of Contents

<b>1. Introduction .....</b>	<b>1-1</b>
1.1 Description of the Proposed Refinements .....	1-1
1.2 Section 106 of the National Historic Preservation Act.....	1-1
1.3 Section 106 Consultation.....	1-2
1.4 Organization of this Section 106 Assessment of Effects Report .....	1-2
1.5 Area of Potential Effects (APE) and Expanded Area of Potential Effects (Expanded APE).....	1-1
1.5.1 Original APE as Defined in 2015.....	1-1
1.5.2 Expanded APE as Defined in 2018 .....	1-2
1.6 Identification of Historic Properties.....	1-2
1.7 Assessment of Effects.....	1-2
1.8 Avoidance Alternatives, Planning to Minimize Effects, and Mitigation Assessment of Effects.....	1-3
<b>2. Proposed Project Refinements Description .....</b>	<b>2-4</b>
<b>3. Historic Properties.....</b>	<b>3-1</b>
3.1 Identification Efforts.....	3-1
3.2 Summary of Historic Properties in Areas of Proposed Project Refinement .....	3-1
<b>4. Assessment of Effects.....</b>	<b>4-1</b>
4.1 Determination of Effects to Newly Identified NRHP-Eligible Resources in the Revised APE.....	4-1
4.1.1 Asbury Temple United Methodist Church (DH 3964).....	4-2
4.1.2 Glenview/Woodstock Neighborhood (DH 3965) .....	4-6
4.2 Determination of Effects to Previously Identified NRHP-Eligible Resources in the Revised APE.....	4-10
4.2.1 H.G. Baity House (OR 2772) .....	4-13
4.2.2 Highland Woods Historic District (OR 1460).....	4-15
4.2.3 Walter Curtis Hudson Farm (DH 2373) .....	4-17
4.2.4 Ruth-Sizemore Store (DH 2561).....	4-23
4.2.5 Smith Warehouse (DH 89) .....	4-25
4.2.6 Duke Memorial United Methodist Church (DH 1253) .....	4-27
4.2.7 North Carolina Mutual Building (DH 2477).....	4-29
4.2.8 American Tobacco Company Manufacturing Plant (DH 1872 and DH 10) .....	4-31
4.2.9 Downtown Durham Historic District (DH 1692).....	4-34
4.2.10 Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH 1067).....	4-35
4.2.11 Venable Tobacco Company Warehouse (DH 97) .....	4-37
4.2.12 Durham Water Tower and Valve House (DH 3508) .....	4-39
4.2.13 Russell Memorial CME Church (DH 3663).....	4-41
<b>5. References Cited.....</b>	<b>5-1</b>
<b>Appendix A: Resumes .....</b>	<b>1</b>

## List of Figures

Figure 3-1. Project Location in Durham and Orange Counties, North Carolina, Index Map.....	3-2
Figure 3-2. Project Location in Durham and Orange Counties, North Carolina, Sheet 1 of 17.....	3-3
Figure 3-3. Project Location in Durham and Orange Counties, North Carolina, Sheet 2 of 17.....	3-4
Figure 3-4. Project Location in Durham and Orange Counties, North Carolina, Sheet 3 of 17.....	3-5
Figure 3-5. Project Location in Durham and Orange Counties, North Carolina, Sheet 4 of 17.....	3-6
Figure 3-6. Project Location in Durham and Orange Counties, North Carolina, Sheet 5 of 17.....	3-7
Figure 3-7. Project Location in Durham and Orange Counties, North Carolina, Sheet 6 of 17.....	3-8
Figure 3-8. Project Location in Durham and Orange Counties, North Carolina, Sheet 7 of 17.....	3-9
Figure 3-9. Project Location in Durham and Orange Counties, North Carolina, Sheet 8 of 17.....	3-10
Figure 3-10. Project Location in Durham and Orange Counties, North Carolina, Sheet 9 of 17.....	3-11
Figure 3-11. Project Location in Durham and Orange Counties, North Carolina, Sheet 10 of 17.....	3-12
Figure 3-12. Project Location in Durham and Orange Counties, North Carolina, Sheet 11 of 17.....	3-13
Figure 3-13. Project Location in Durham and Orange Counties, North Carolina, Sheet 12 of 17.....	3-14
Figure 3-14. Project Location in Durham and Orange Counties, North Carolina, Sheet 13 of 17.....	3-15
Figure 3-15. Project Location in Durham and Orange Counties, North Carolina, Sheet 14 of 17.....	3-16
Figure 3-16. Project Location in Durham and Orange Counties, North Carolina, Sheet 15 of 17.....	3-17
Figure 3-17. Project Location in Durham and Orange Counties, North Carolina, Sheet 16 of 17.....	3-18
Figure 3-18. Project Location in Durham and Orange Counties, North Carolina, Sheet 17 of 17.....	3-19
Figure 4-1. Asbury Temple United Methodist Church (DH 3964), view looking west from E. Lawson Street .....	4-2
Figure 4-2. View of Asbury Temple United Methodist Church (DH 3964), street view showing existing sidewalk along north side of E. Lawson Street and the south side where proposed sidewalk will be located. ...	4-3
Figure 4-3. Location of Asbury Temple United Methodist Church (DH 3964) in Proximity to Proposed Project Refinements .....	4-4
Figure 4-4. Detail view of Asbury Temple United Methodist Church (DH 3964) in Proximity to Proposed Project Refinements .....	4-5
Figure 4-5. Views of the Glenview/Woodstock Neighborhood along Rosewood Street .....	4-6
Figure 4-6. Location of Glenview/Woodstock Neighborhood (DH 3965) in Proximity to Proposed Project Refinements .....	4-7
Figure 4-7. Detail of Glenview/Woodstock Neighborhood (DH 3965) in Proximity to Proposed Project Refinements .....	4-8
Figure 4-8. Street view of the Glenview/Woodstock Neighborhood, looking east along E. Lawson Street from west boundary.....	4-9
Figure 4-9. Street view of the of Glenview/Woodstock Neighborhood, looking west along E. Lawson Street from east boundary. ....	4-9
Figure 4-10. H.G. Baity House (OR 2772) .....	4-13
Figure 4-11. H.G. Baity House, proposed project plans.....	4-14
Figure 4-12. Highland Woods Historic District (OR 1460), representative examples .....	4-15
Figure 4-13. Highland Woods Historic District, proposed project plans.....	4-16
Figure 4-14. Walter Curtis Hudson Farm (DH 2373) .....	4-17
Figure 4-15. Walter Curtis Hudson Farm and Store, proposed project plans.....	4-19
Figure 4-16. Walter Curtis Hudson Farm and Store, proposed project plans.....	4-20
Figure 4-17. Walter Curtis Hudson Farm and Store, proposed project plans.....	4-21
Figure 4-18. Walter Curtis Hudson Farm and Store, proposed project plans.....	4-22
Figure 4-19. Ruth-Sizemore Store (DH 2561) .....	4-23
Figure 4-20. Ruth-Sizemore Store, proposed project plans.....	4-24
Figure 4-21. Smith Warehouse (DH 89) .....	4-25
Figure 4-22. Smith Warehouse, proposed project plan.....	4-26
Figure 4-23. Duke Memorial United Methodist Church (DH 1253) .....	4-27
Figure 4-24. Duke Memorial United Methodist Church, proposed project renderings showing proposed changes in retaining wall along South Duke Street (looking north, left; looking south, right) .....	4-28
Figure 4-25. North Carolina Mutual Building (DH 2477).....	4-29

Figure 4-26. North Carolina Mutual Building, streetview showing area where proposed retaining wall height will be increased .....4-30

Figure 4-27. American Tobacco Company Manufacturing Plant (DH 1872 and DH 10) .....4-31

Figure 4-28. Proposed Signature Civic Space plans in area of American Tobacco Company Manufacturing Plant/Bull Durham Tobacco Company/W.T. Blackwell and Company Building .....4-32

Figure 4-29. Proposed Signature Civic Space in area of American Tobacco Company Manufacturing Plant/Bull Durham Tobacco Company/W.T. Blackwell and Company Building .....4-33

Figure 4-30. Downtown Durham Historic District (DH 1692) .....4-34

Figure 4-31. Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH1067) .....4-35

Figure 4-32. Proposed project plans in area of Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH1067) .....4-36

Figure 4-33. Venable Tobacco Company Warehouse (DH 97).....4-37

Figure 4-34. Proposed project plans in area of the Venable Company Tobacco Warehouse .....4-38

Figure 4-35. Durham Water Tower and Valve House (DH 3508).....4-39

Figure 4-36. Proposed project plans in area of Durham Water Tower and Valve House.....4-40

Figure 4-37. Russell Memorial CME Church (DH 3663) .....4-41

Figure 4-38. Proposed project plans in area of Russell Memorial CME Church (DH 3663) .....4-42

### List of Tables

Table 4-1. Recommended Effects to Newly Identified NRHP Eligible Historic Properties in the D-O LRT Project Revised APE .....4-1

Table 4-2. Recommended Effects to Previously Recorded NRHP Listed and Eligible Historic Properties in the D-O LRT Project Revised APE .....4-10



Acronyms and Abbreviations	
Acronym	Definition
AOE	Assessment of Effects
APE	Area of Potential Effects
DEIS	Draft Environmental Impact Statement
D-O LRT	Durham-Orange Light Rail Transit
DPAC	Durham Performing Arts Center
FTA	Federal Transit Administration
NEPA	National Environmental Policy Act
NC	North Carolina
NCCU	North Carolina Central University
NCRR	North Carolina Railroad
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
ROD	Record of Decision
ROMF	Rail Operations and Maintenance Facility
NC SHPO	North Carolina State Historic Preservation Office
SL	State Study List

## Management Summary

The *Section 106 Preliminary Assessment of Effects for Historic Properties for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina* was completed in August 2015 and the *Supplemental Environmental Assessment Historic Architecture Technical Report*, which included an expanded area of potential effects, was completed in June 2018 (Brown 2015; Turco et al. 2018).

This Supplemental Environmental Assessment includes proposals to refine the Previous Design (documented in the 2016 Amended Record of Decision) to include the following:

- revised station designs to reflect the use of two-car trains
- addition of, and revisions to, bicycle and pedestrian facilities to improve access to stations and parking areas
- changes in the locations of the Traction Powered Substations (TPSS)
- proposed improvements associated with joint development opportunities
- minor modifications to the track alignment and the surrounding roadway network
- minor shifts in the station locations

Most of the Proposed Refinements are minor and are found in developed areas.

This report evaluates the Proposed Refinements relative to historic resources. Based on the analysis of effects to historic resources per Section 106 of the National Historic Preservation Act (NHPA), the Federal Transit Administration has completed the Section 106 Determination of Effects.

The Federal Transit Administration (FTA) made a “No Effect” finding on the two of the 15 architectural historic properties and “No Adverse Effect” for the other 13 properties. FTA made an overall determination that the Proposed Refinements will **have no adverse effect** on any architectural historic properties. FTA intends to finalize the determination of effects before the final environmental decision document, at the conclusion of consultation with the North Carolina State Historic Preservation Office, the consulting parties, and any public comments received on the Supplemental EA.

## 1. Introduction

### 1.1 Description of the Proposed Refinements

This report supplements the *Section 106 Preliminary Assessment of Effects for Historic Properties for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina* (Brown 2015) and the June 2018 *Supplemental Environmental Assessment Historic Architecture Technical Report*, which included an expanded APE (Turco et al. 2018). Since the issuance of the Amended Record of Decision in 2016, refinements have been proposed to the Durham-Orange Light Rail Transit (D-O LRT) project in Durham and Orange counties, and the changes are reflected in the revision of the project's area of potential effects (APE) (Figures 4-1 to 4-18). The majority of the Proposed Refinements are minor and are found in developed areas. This technical report makes effects determinations for newly identified National Register of Historic Places (NRHP)-eligible resources, and reexamines the effects to NRHP-eligible resources identified in the 2015 assessment of effects report (Brown 2015).

The Proposed Refinements include the following changes:

- Revised station designs to reflect the use of two-car trains (rather than three-car trains discussed in the Amended ROD)
- Addition of (and revisions to) bicycle and pedestrian facilities to improve access to stations and parking areas
- Changes in the locations of the Traction Powered Substation (TPSS)
- Proposed improvements associated with joint development opportunities
- Minor modifications to the track alignment and the surrounding roadway network
- Minor shifts in the station locations, based on changes in the track design

### 1.2 Section 106 of the National Historic Preservation Act

The historic architectural survey effort for the proposed D-O LRT project complied with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (36 CFR 800), Section 101(b)(4) of the National Environmental Policy Act of 1969, and Section 1(3) and 2(b) of Executive Order 11593. The Section 106 assessments included in the Historic Architectural Survey Report considered only historic properties in the APE for the proposed project. The APE was developed by the Federal Transit Administration (FTA) in consultation with the North Carolina State Historic Preservation Officer (NC SHPO) and NC SHPO staff. It encompasses the geographic area within which the proposed project may directly or indirectly cause alterations in the character or use of historic properties.

The Section 106 assessments identified resources 45 years of age or older within the APE and evaluated their potential for listing in the NRHP and provide an assessment of effects to historic properties that would result from the planned undertaking. In general, properties less than 50 years of age are presumed to be ineligible for the National Register, unless they possess exceptional importance. Because construction is expected to occur over a period of several years following completion of the environmental review process, and at the request of the NC SHPO, the eligibility assessment included all resources 45 years of age or older at the time the identification studies commenced in 2014.

### 1.3 Section 106 Consultation

The FTA submitted the Historic Architectural Survey Report to the NC SHPO on March 19, 2015. It included recommendations of NRHP eligibility for historic resources located within the APE. On April 16, 2015 the NC SHPO concurred with and commented on the report. On June 25, 2015 the FTA submitted to the SHPO a revised final report that addressed the SHPO's comments.

In this report, the FTA made a Preliminary "No Effect" finding on 13 of the 25 architectural historic properties and a Preliminary "No Adverse Effect" finding for the other 12 properties. The FTA made an overall Preliminary Determination that the D-O LRT project will have **no adverse effect** on any architectural historic properties. FTA intends to make a final determination of effects finding before the Final EIS/ROD at the conclusion of consultation with the SHPO, the consulting parties, and any public comments received on the DEIS.

The FTA submitted the *Supplemental Environmental Assessment Historic Architecture Technical Report* (Turco et al. 2018), which included an expanded APE and two newly identified historic properties, on June 29, 2018. The NC SHPO requested additional information regarding the two newly identified properties in a letter dated July 24, 2018. The additional information was submitted on September 19, 2018 and on October 1, 2018. On October 24, 2018 the NC SHPO concurred with the report's determinations.

### 1.4 Organization of this Section 106 Assessment of Effects Report

This report provides data on and discussion of the effect determinations for all architectural historic properties within the APE that are eligible for or are listed in the NRHP. Each discussion is accompanied by a map or maps showing the NRHP-listed or eligible boundaries of the historic property and the relationship of those boundaries to the proposed project. Each discussion also includes photographs, depicting the historic property and its relationship to the proposed project, to present contextual data for the effect evaluation. Following a description of individual historic properties, an overall project effect is presented.

## 1.5 Area of Potential Effects (APE) and Expanded Area of Potential Effects (Expanded APE)

The APE is defined in the Section 106 regulations of the NHPA (36 CFR 800.16(d)) as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”

### 1.5.1 Original APE as Defined in 2015

The following APE for historic architectural resources was delineated in *Section 106 Preliminary Assessment of Effects for Historic Properties for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina* (Brown 2015):

- From its terminus in Chapel Hill until it reaches dense urban development in downtown Durham at South Gregson Street, the APE generally follows property boundaries extending 500 feet to either side of the center line of the Undertaking’s alignment and alternative alignments, so is generally 1000 feet wide. However, due to the presence of several large parcels the APE was not expanded to include the full parcel if the parcel size was 10 acres or larger. Instead the APE generally follows the 500-foot measure taking into account buildings and other barriers. The APE does, however, expand and contract outside of downtown Durham depending on the presence of I-40, proposed Rail Operations Maintenance Facilities (ROMFs), park-and-ride facilities, and the elevation of sections of the Undertaking. Additionally, the APE was expanded to include the entire boundary of any NRHP-listed or eligible properties/districts that are partially located within the area identified as the APE.
- The APE is drawn tighter where it encounters I-40 in Durham County. From just north of I-40’s interchange with NC 54 to just south of its interchange with Durham-Chapel Hill Boulevard (US 15 - 501), the APE terminates at the right-of-way on the east side of the interstate, short of 500 feet from the centerline of the Locally Preferred Alternative (LPA).
- Within the urban core of the City of Durham, the APE is tighter than 500 feet from the centerline of the LPA and the proposed Alston Avenue ROMF. From Buchanan Boulevard east to Briggs Avenue, it includes the resources that directly overlook the corridor and the ROMF.
- At the eastern terminus of the Undertaking at the Alston Avenue ROMF, the APE terminates at the right-of-way on the south side of the Durham Freeway (NC 147), short of 500 feet from the centerline of the LPA and the southern edge of the ROMF.
- The APE extends farther than 500 feet from the centerline of the various corridors in the vicinity of the sites of four potential ROMFs in Durham County and at some sections where the Undertaking is elevated. At the Leigh Village and Farrington Road ROMF sites, the APE extends 500 feet west of the site. At the Paterson Place ROMF, the APE extends out 500 feet from the edges of the ROMF at all sides. It also extends 500 feet to the east of the Cornwallis Road ROMF.
- Where sections of the Undertaking are elevated, the APE may have been widened beyond a general 1000-foot width, depending on the nature of the elevation and the terrain.

Detailed rationales for these distances can be found in the *Architectural Resources – Area of Potential Effects (APE) Report* (November 2014) submitted by the FTA to the SHPO. The APE was determined by the FTA in consultation with the SHPO on January 6, 2015.

### 1.5.2 Expanded APE as Defined in 2018

The Expanded APE contains the geographic area as described above with the addition of approximately 75 acres. The Previous Design (as documented in the 2016 Amended Record of Decision) has been refined to include the following: revised station designs to reflect the use of two-car trains; addition of (and revisions to) bicycle and pedestrian facilities to improve access to stations and parking areas; changes in the locations of the Traction Powered Substations (TPSS); proposed improvements associated with joint development opportunities; minor modifications to the track alignment and the surrounding roadway network; and minor shifts in the station locations, based on changes in the track design.

## 1.6 Identification of Historic Properties

Historic properties are listed in or determined eligible for listing in the NRHP by applying the National Register Criteria for Evaluation (36 CFR Part 63). The Criteria state that the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded, or may be likely to yield, information important in prehistory or history.

Built resources are typically evaluated under Criteria A, B, and C; Criterion D applies primarily to archaeological resources.

If a property is determined to possess historic significance, its integrity is evaluated using the following seven aspects of integrity to determine if it conveys historic significance: location, design, setting, materials, workmanship, feeling, and association. If a property is determined to possess historic significance under one or more criteria **and** retains integrity to convey its significance, the property is determined to be eligible for listing in the NRHP.

## 1.7 Assessment of Effects

Effects assessments are based on the criteria of adverse effect as defined in 36 CFR 800.5 “Assessment of adverse effects.” According to this portion of the regulations, the criteria of adverse effect are defined as follows:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by

the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

Examples of adverse effects are identified in 36 CFR 800.5 and include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance

Types of effects to historic properties under Section 106:

- **No Effect:** Per 36 CFR 800.4(d)(1), an undertaking may have no effect to historic properties present in the APE, and a finding of “No Historic Properties Affected” may be determined for an undertaking. This finding indicates that an undertaking would not alter any aspects of integrity for any historic properties. This provision has been used as the basis for making a finding of “No Effect” for individual historic properties within the APE for the proposed project.
- **No Adverse Effect:** Per 36 CFR 800.5(b), an undertaking may be determined to have “No Adverse Effect” to historic properties if the undertaking’s effects do not meet the criteria of adverse effect as described below. If project implementation would alter a specific aspect of integrity for a historic property but the effect would not alter a characteristic that qualifies that historic property for inclusion in the NRHP in a manner that diminishes the significant aspect of integrity, then the finding for that aspect of integrity is “No Adverse Effect.”
- **Adverse Effect:** An adverse effect is determined if the undertaking would alter a characteristic that qualifies that contributing resource for inclusion in the NRHP in a manner that diminishes the significant aspect(s) of integrity.

## 1.8 Avoidance Alternatives, Planning to Minimize Effects, and Mitigation Assessment of Effects

Per 36 CFR 800.6, a finding of adverse effect to historic properties requires that efforts to resolve such effects by developing and evaluating alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects must be undertaken.

Throughout the course of project planning, significant efforts have been made to avoid and/or minimize adverse effects to historic properties; to date, these efforts have included minimizing property requirements for right-of-way realignments; developing context-sensitive designs; retaining character-defining features of both the built environment and the landscape; and moving stations and ancillary

features to avoid demolitions or substantial potential construction impacts to historic buildings; and other minimization and mitigation measures.

These efforts have minimized effects on architectural historic properties and have resulted in a determination that the D-O LRT project would have **no adverse effects** on any of the 15 architectural historic properties located within the APE. Examples of how FTA and Go Triangle have minimized effects includes the commitment to provide a landscape visual buffer for the following historic resources due to their residential or rural settings: the Highland Woods HD, the Walter Curtis Hudson Farm, and the Ruth-Sizemore Store. This visual buffer would provide a blooming of at least two seasons of each year.

## 2. Proposed Project Refinements Description

The Proposed Project Refinements have been incorporated into the Previous Project Design based on the following:

- Advancements in design since the Amended ROD, including the recommendations from a value engineering workshop; and
- Responses to public comments and stakeholder feedback on the previous National Environmental Policy Act (NEPA) documentation and the Amended ROD.

The Proposed Project Refinements include the following changes:

- Revised station designs to reflect the use of two-car trains (rather than three-car trains discussed in the Amended ROD);
- Addition of (and revisions to) bicycle and pedestrian facilities to improve access to stations and parking areas;
- Changes in the locations of the Traction Powered Substation (TPSS);
- Proposed improvements associated with joint development opportunities;
- Minor modifications to the track alignment and the surrounding roadway network;
- Minor shifts in the station locations, based on changes in the track design; and
- Addition of a light rail station at Blackwell/Mangum Streets.



### 3. Historic Properties

#### 3.1 Identification Efforts

The Proposed Project Refinements expanded the APE by a total of 75 acres. Revised APE maps were created for 13 segments as part of the Supplemental *Environmental Assessment Historic Architecture Technical Report* (Turco et al. 2018). The expanded APE resulted in the identification of two new historic properties eligible for the NRHP, the Glenview/Woodstock Neighborhood (DH 3965) and the Asbury Temple United Methodist Church (DH 3964). Figures 3-1 through 3-18 are updated maps showing all 17 segments of the APE, including three segments that are not impacted by the Proposed Project Refinements. Both a reconnaissance survey and intensive survey were completed for the Proposed Project Refinements. These efforts are described in detail in appendix F-2, the Historic Architecture Technical Report.

#### 3.2 Summary of Historic Properties in Areas of Proposed Project Refinement

The expanded APE resulted in the identification of two new historic properties eligible for the NRHP, the Glenview/Woodstock Neighborhood (DH 3965) and the Asbury Temple United Methodist Church (DH 3964). There are 13 historic properties that were previously identified that are also located in the expanded APE. These 13 properties are either listed in the NRHP or have been determined eligible for the NRHP by FTA in consultation with the NC SHPO.

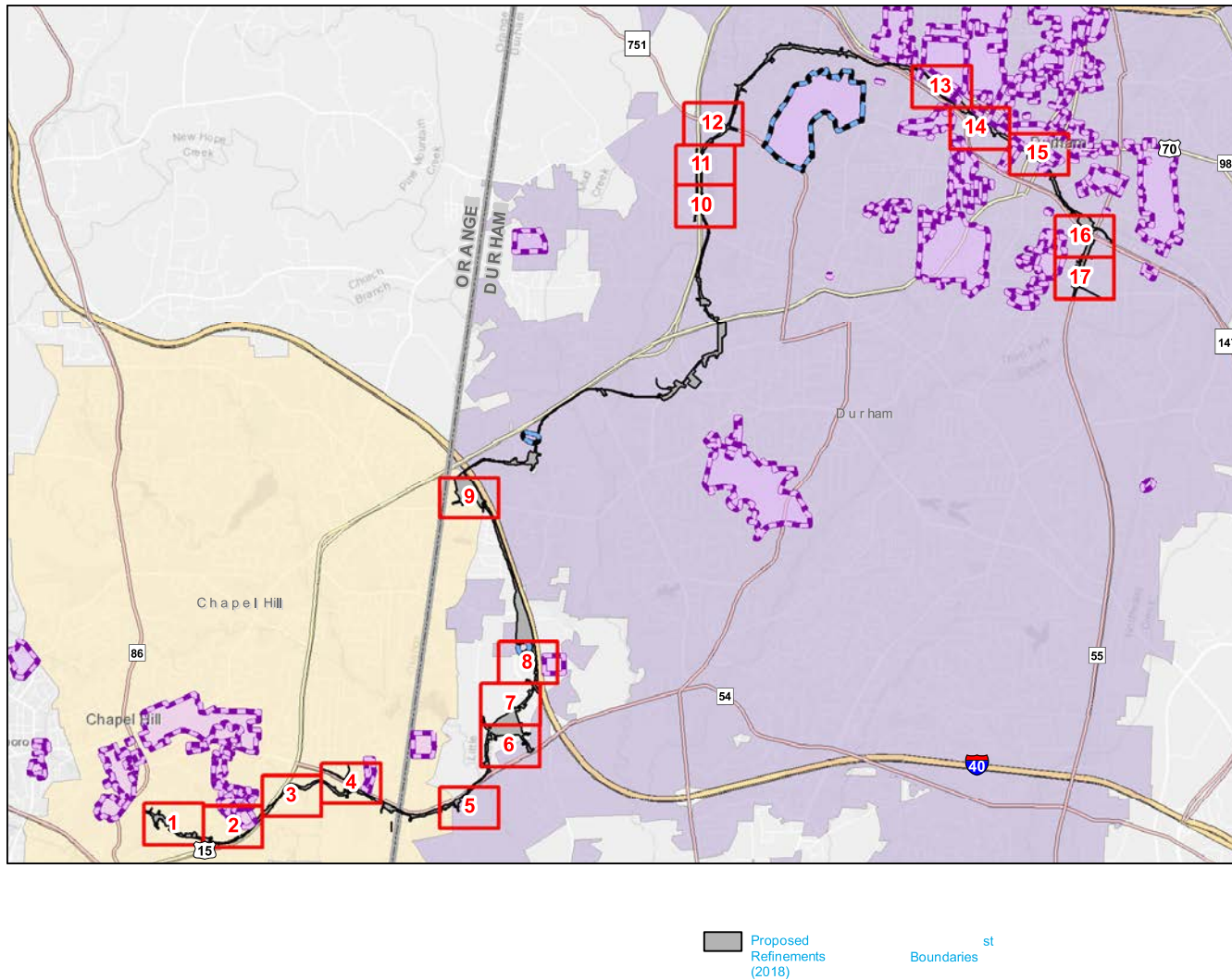
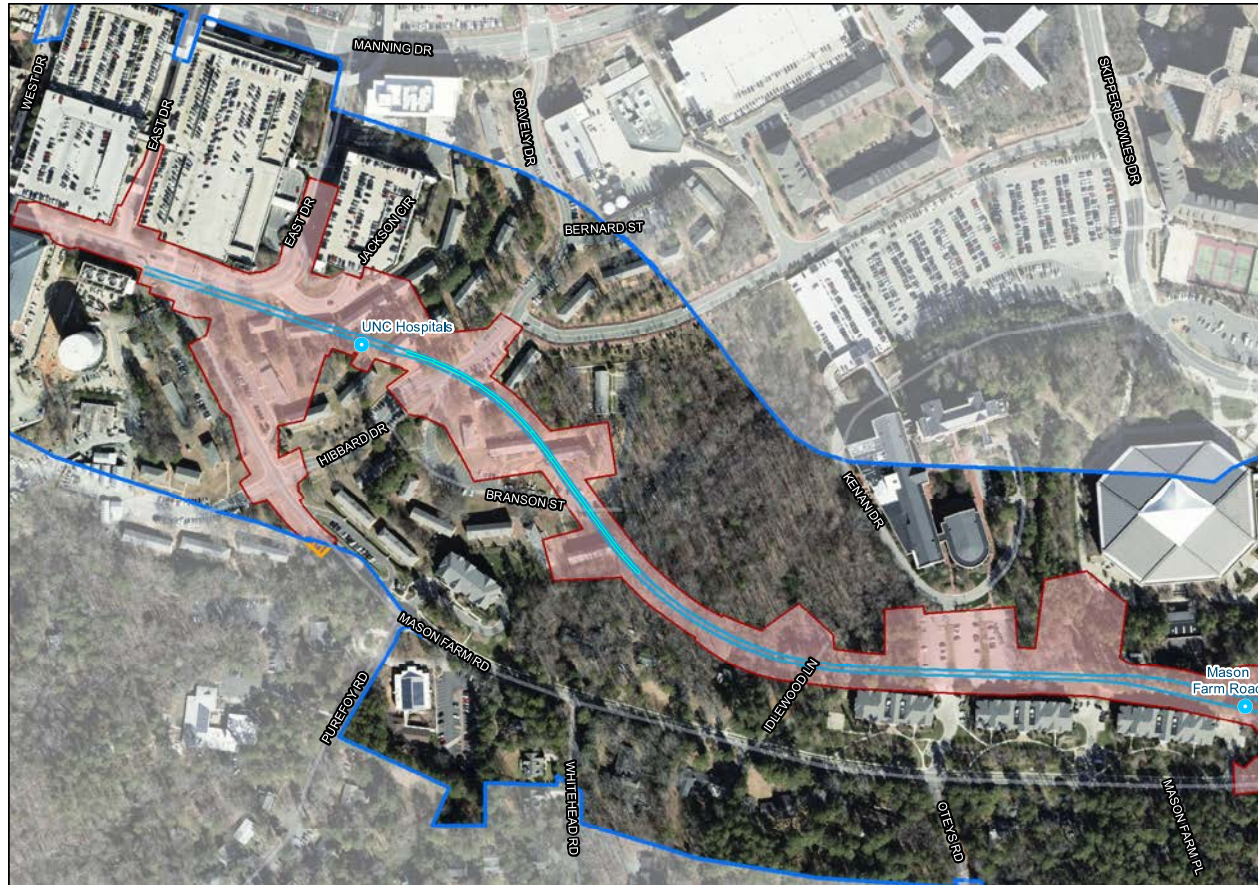


Figure 3-1. Project Location in Durham and Orange Counties, North Carolina, Index Map



ements (2018)

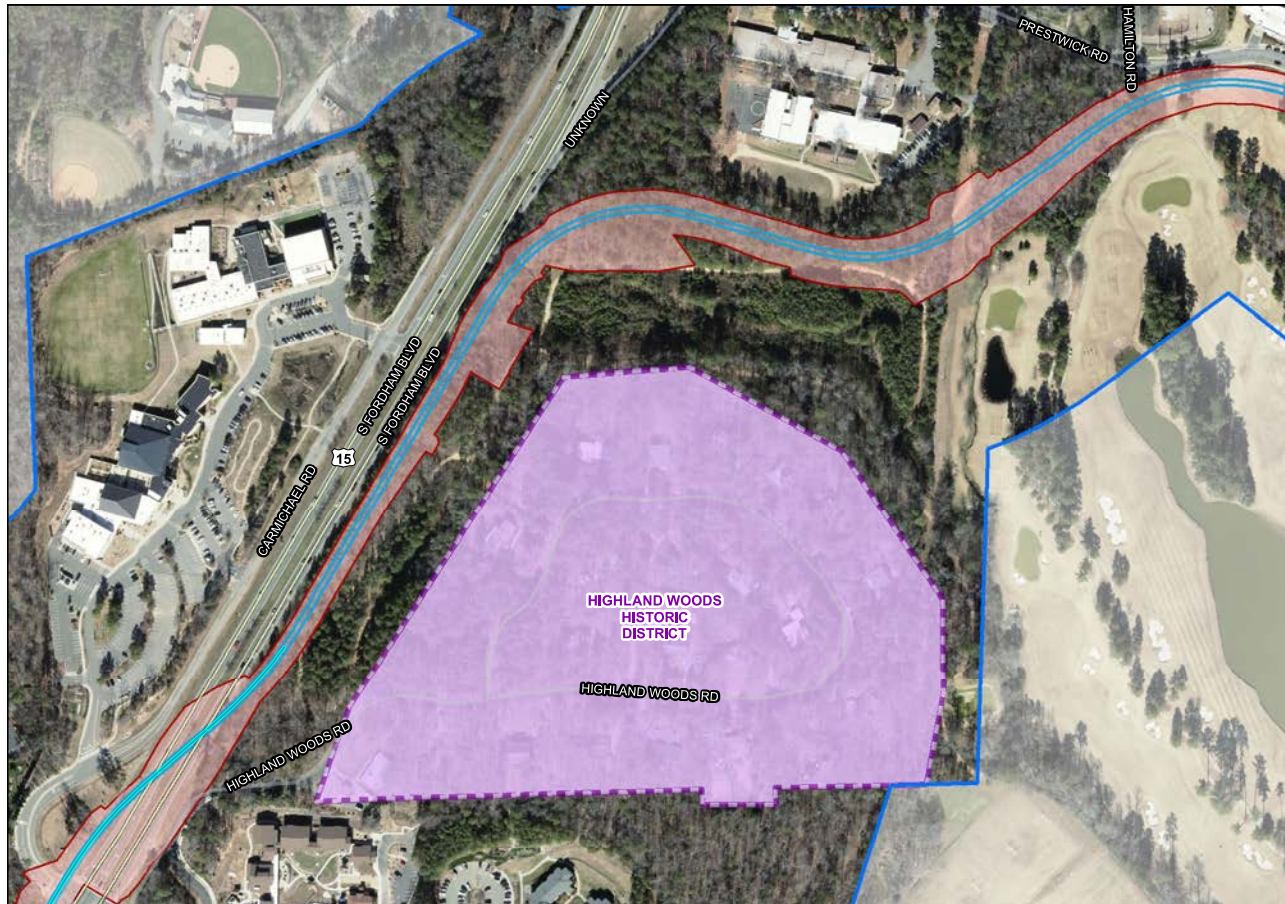
Figure 3-2. Project Location in Durham and Orange Counties, North Carolina, Sheet 1 of 17





2018)

Figure 3-3. Project Location in Durham and Orange Counties, North Carolina, Sheet 2 of 17



s (2018)

Figure 3-4. Project Location in Durham and Orange Counties, North Carolina, Sheet 3 of 17



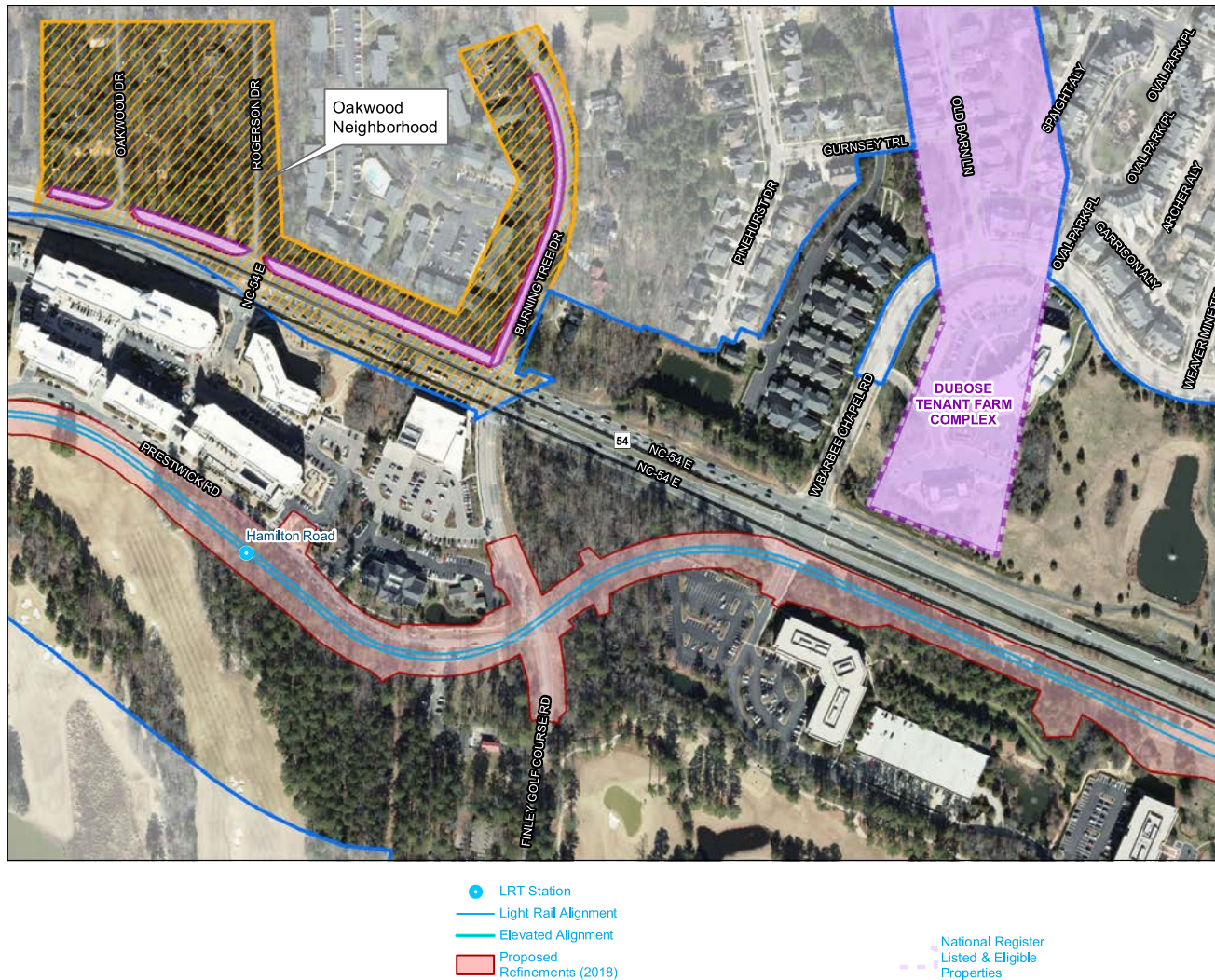


Figure 3-5. Project Location in Durham and Orange Counties, North Carolina, Sheet 4 of 17



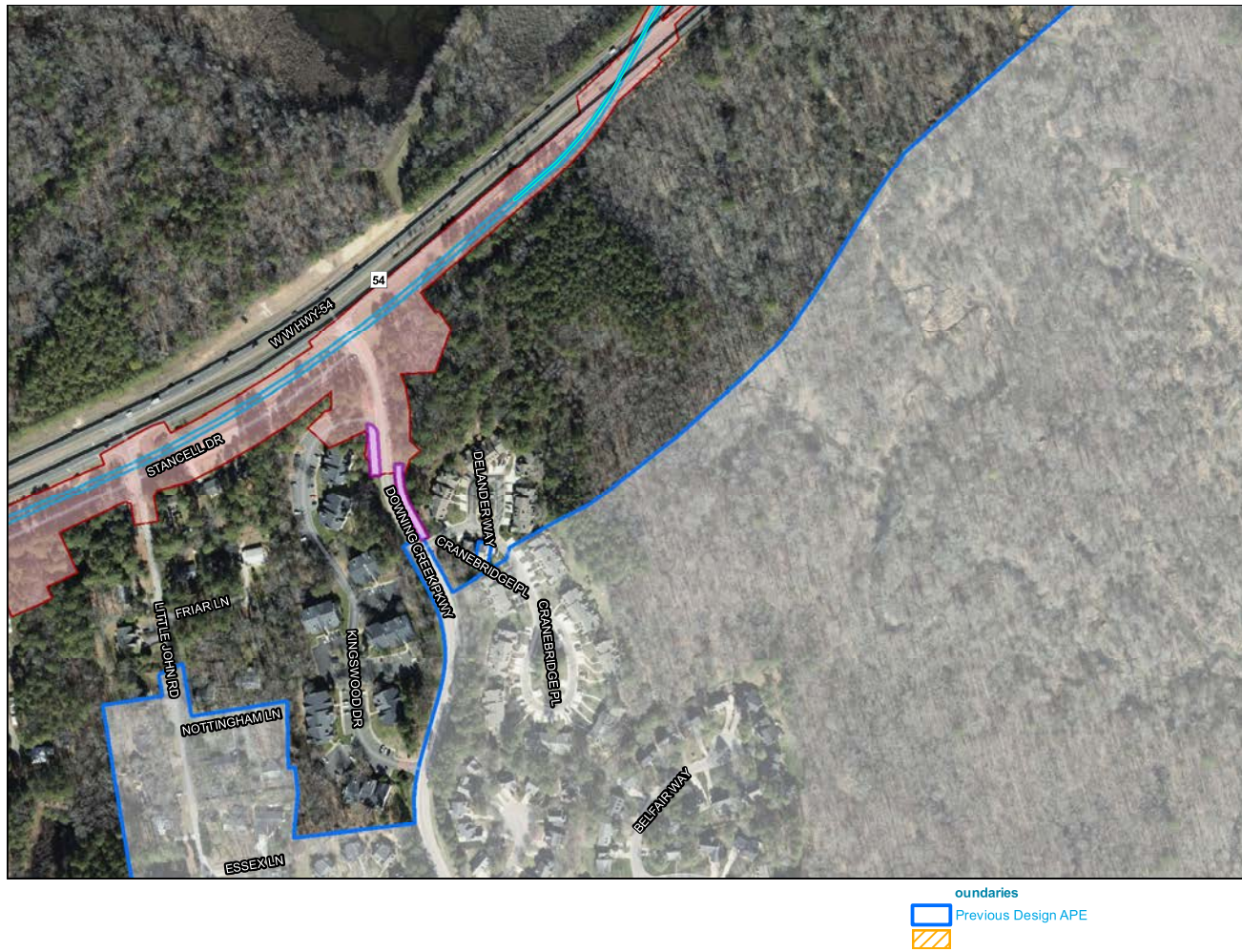
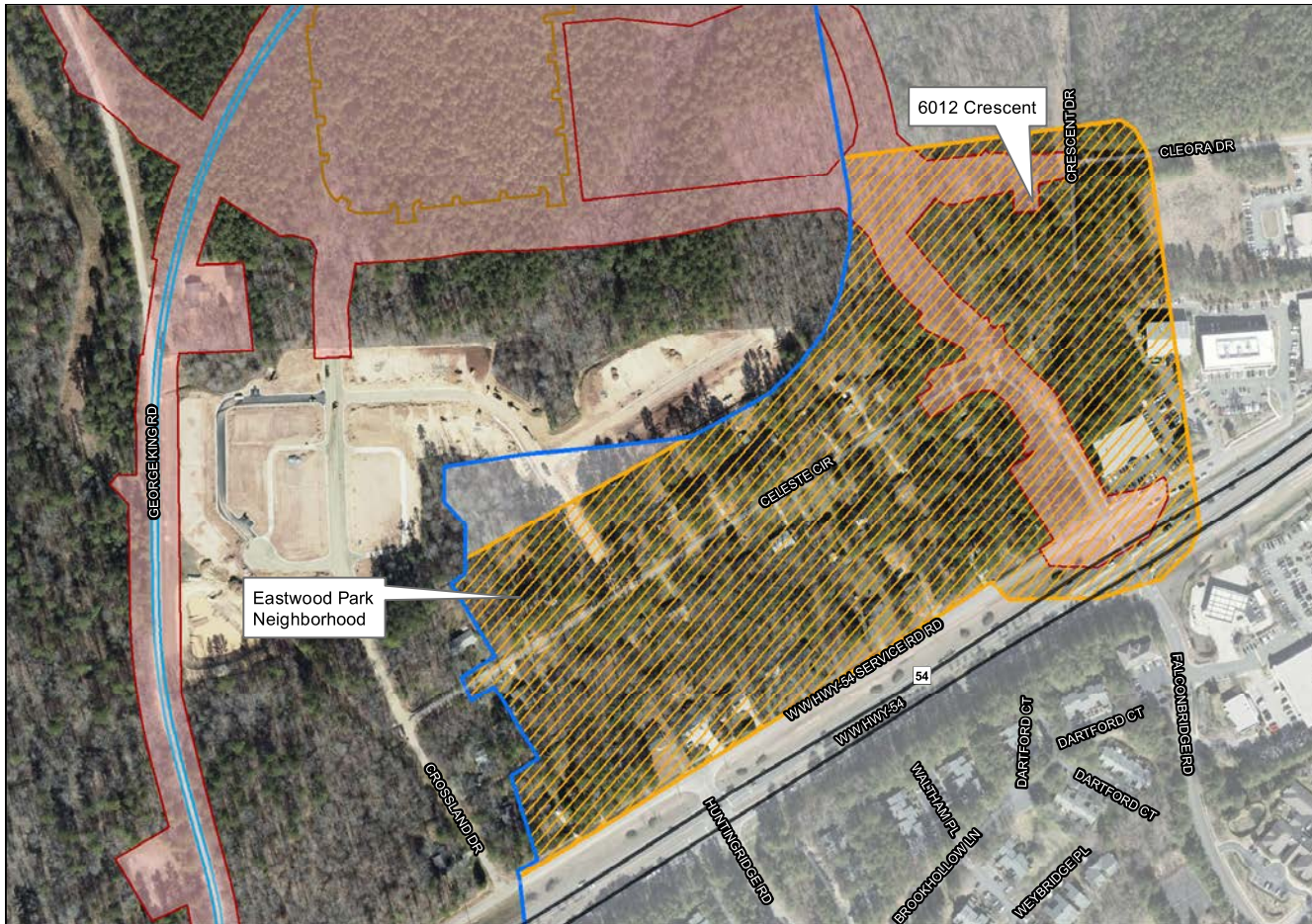


Figure 3-6. Project Location in Durham and Orange Counties, North Carolina, Sheet 5 of 17





Proposed  
Refinements (2018)

Figure 3-7. Project Location in Durham and Orange Counties, North Carolina, Sheet 6 of 17



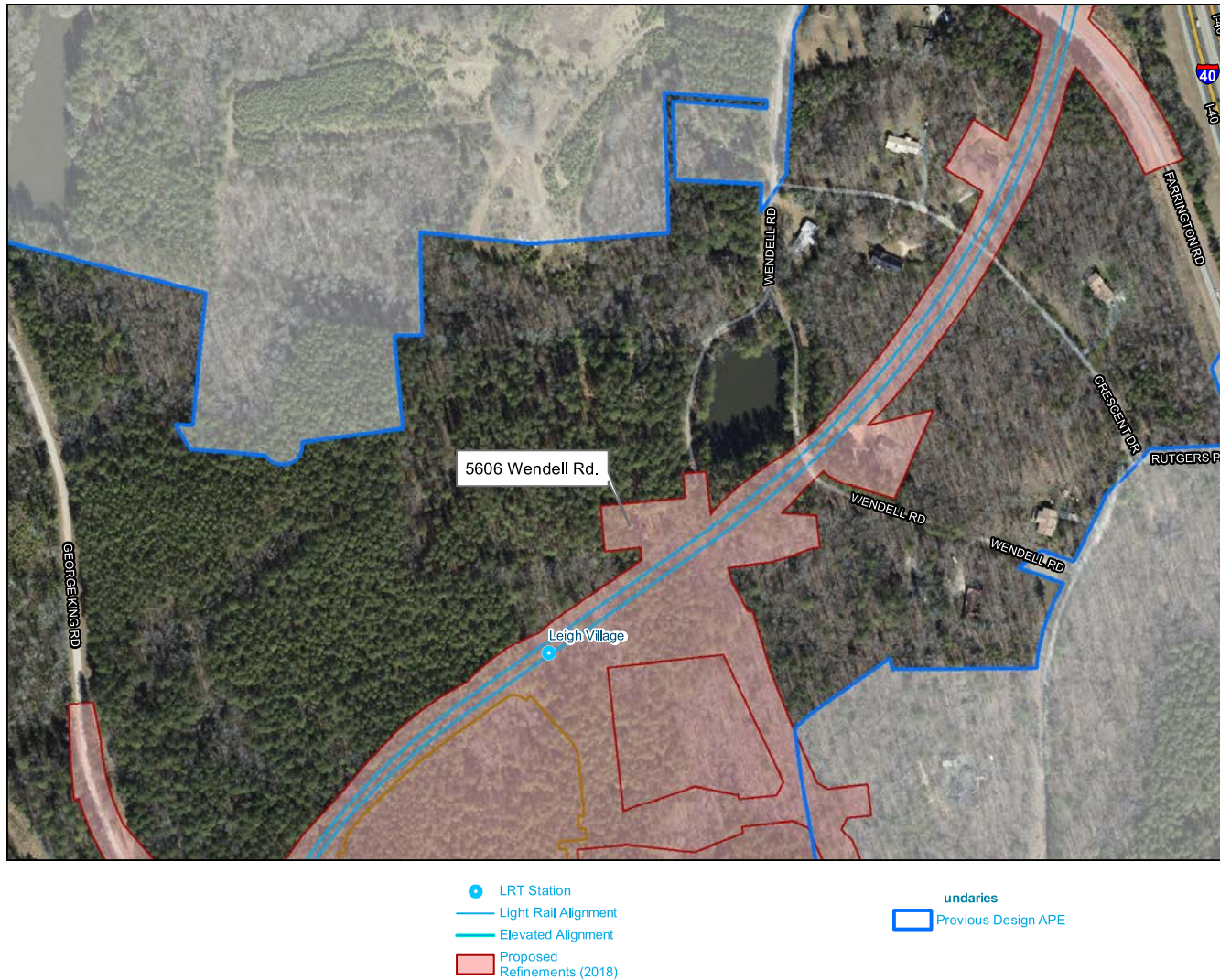


Figure 3-8. Project Location in Durham and Orange Counties, North Carolina, Sheet 7 of 17



Figure 3-9. Project Location in Durham and Orange Counties, North Carolina, Sheet 8 of 17





ments (2018)    Surveyed Only

Figure 3-10. Project Location in Durham and Orange Counties, North Carolina, Sheet 9 of 17

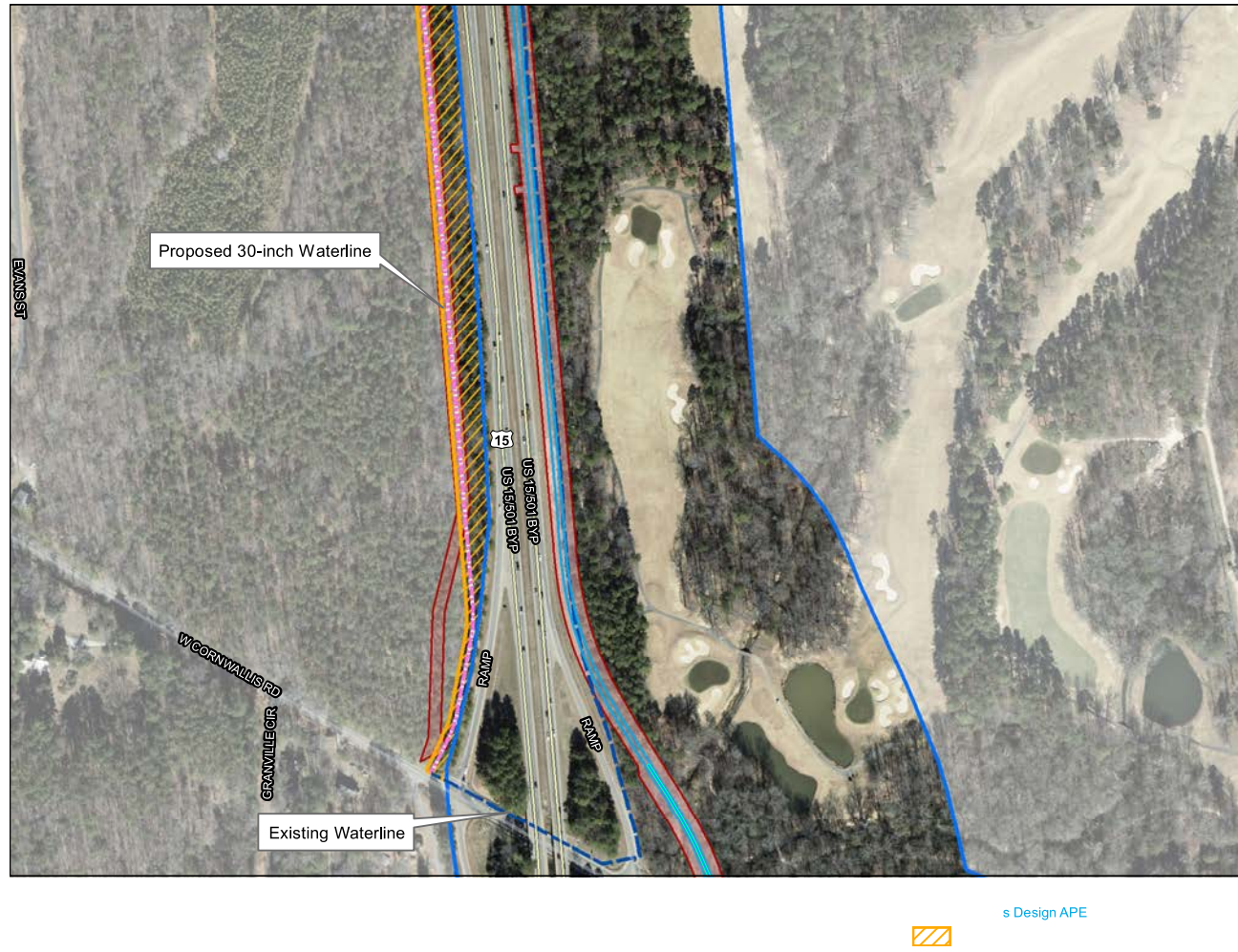
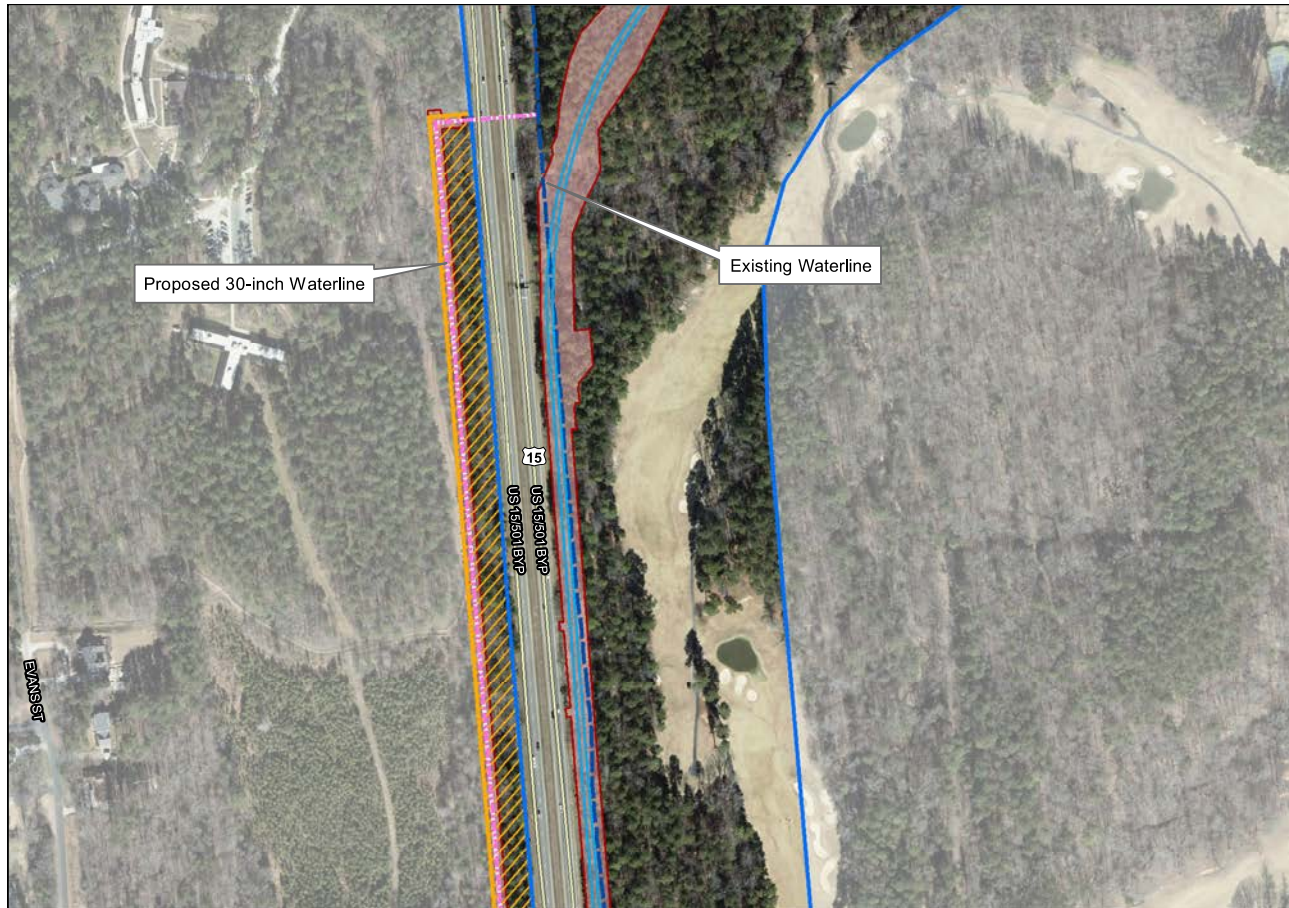


Figure 3-11. Project Location in Durham and Orange Counties, North Carolina, Sheet 10 of 17





Proposed  
Refinements (2018)

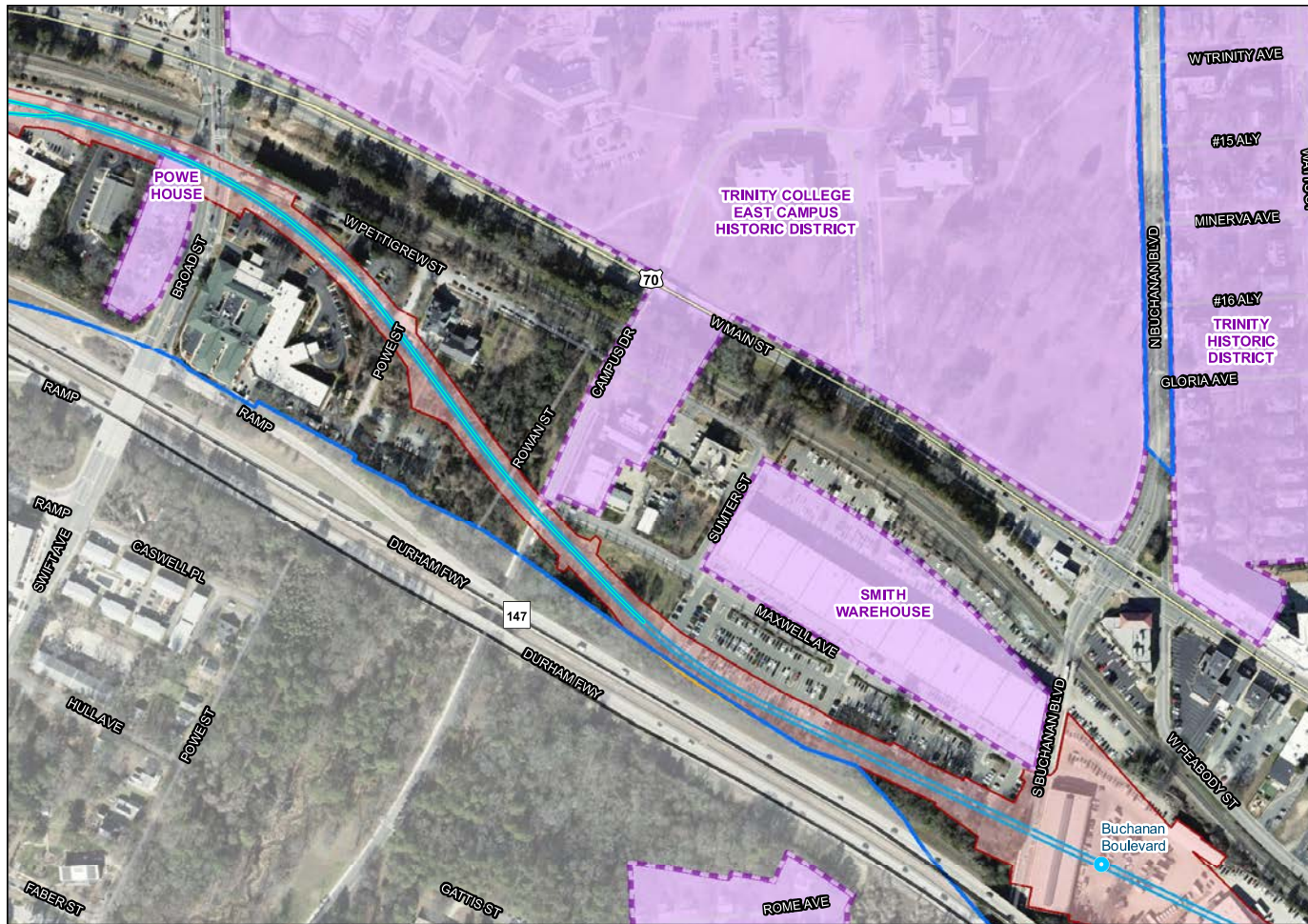
Figure 3-12. Project Location in Durham and Orange Counties, North Carolina, Sheet 11 of 17



 sign APE

Figure 3-13. Project Location in Durham and Orange Counties, North Carolina, Sheet 12 of 17

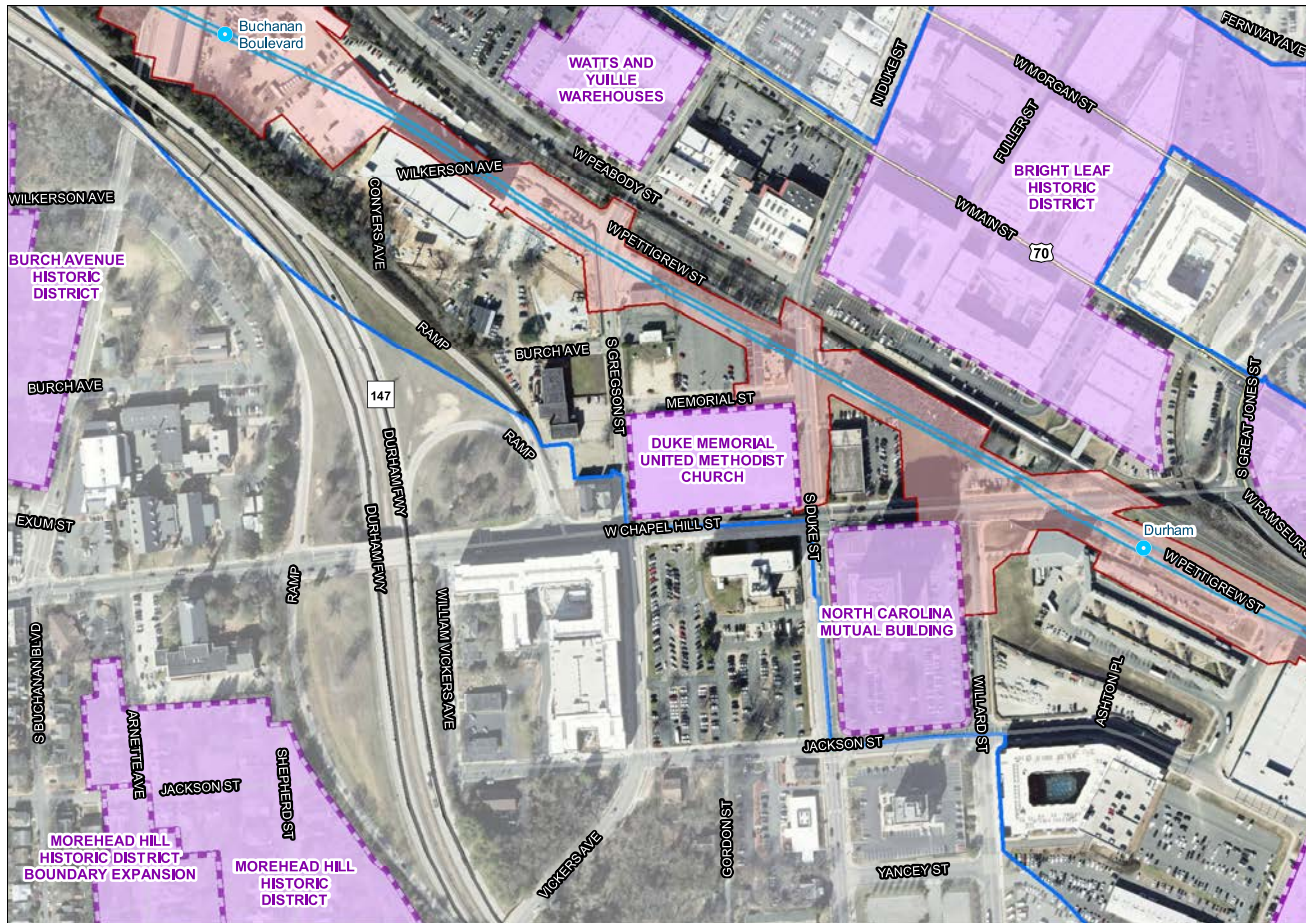




sed  
Refinements (2018)

Figure 3-14. Project Location in Durham and Orange Counties, North Carolina, Sheet 13 of 17








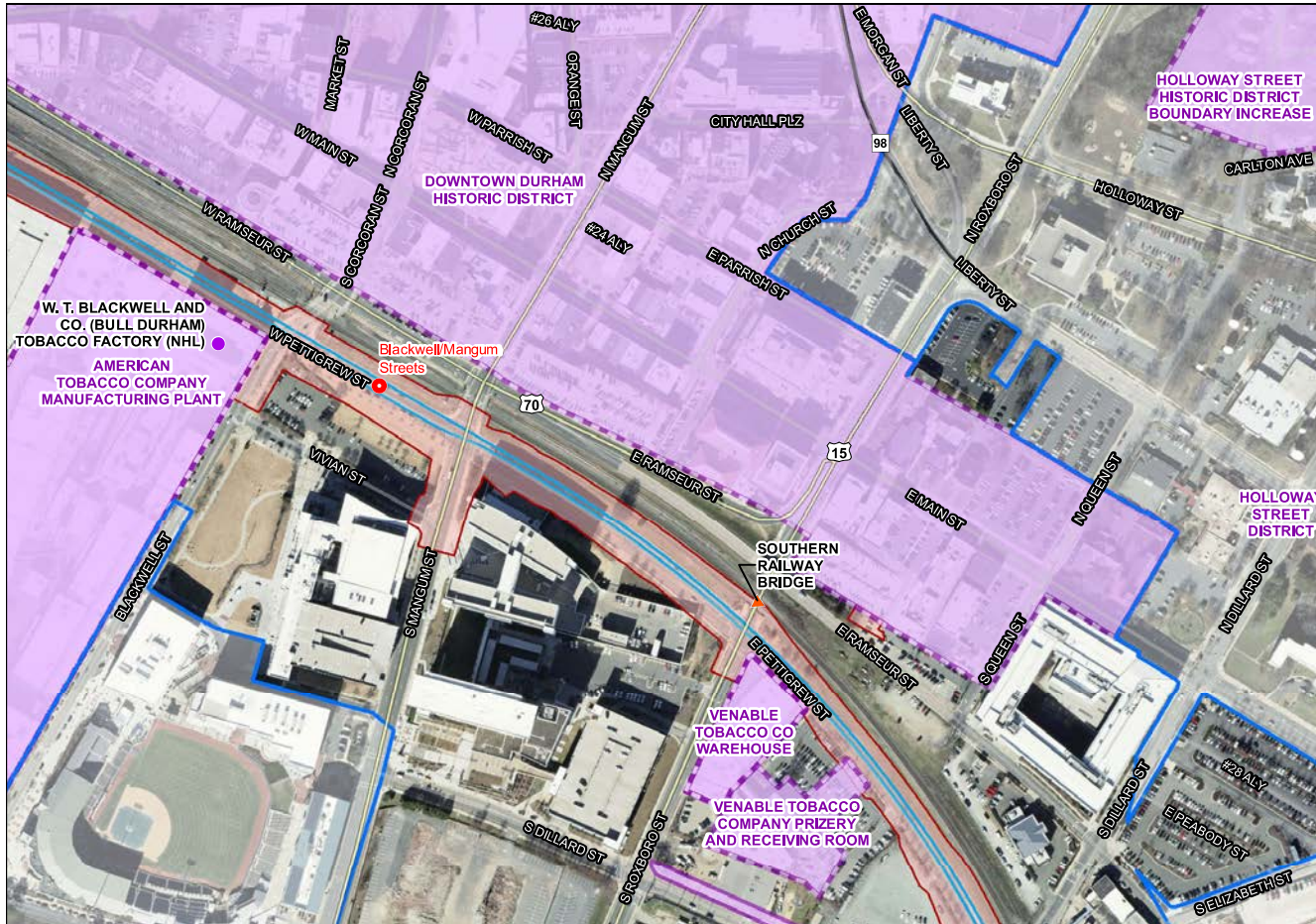
-  Alignment
-  Elevated Alignment
-  Proposed Refinements (2018)

Figure 3-15. Project Location in Durham and Orange Counties, North Carolina, Sheet 14 of 17





 LRT Station Under Study

OE

Figure 3-16. Project Location in Durham and Orange Counties, North Carolina, Sheet 15 of 17



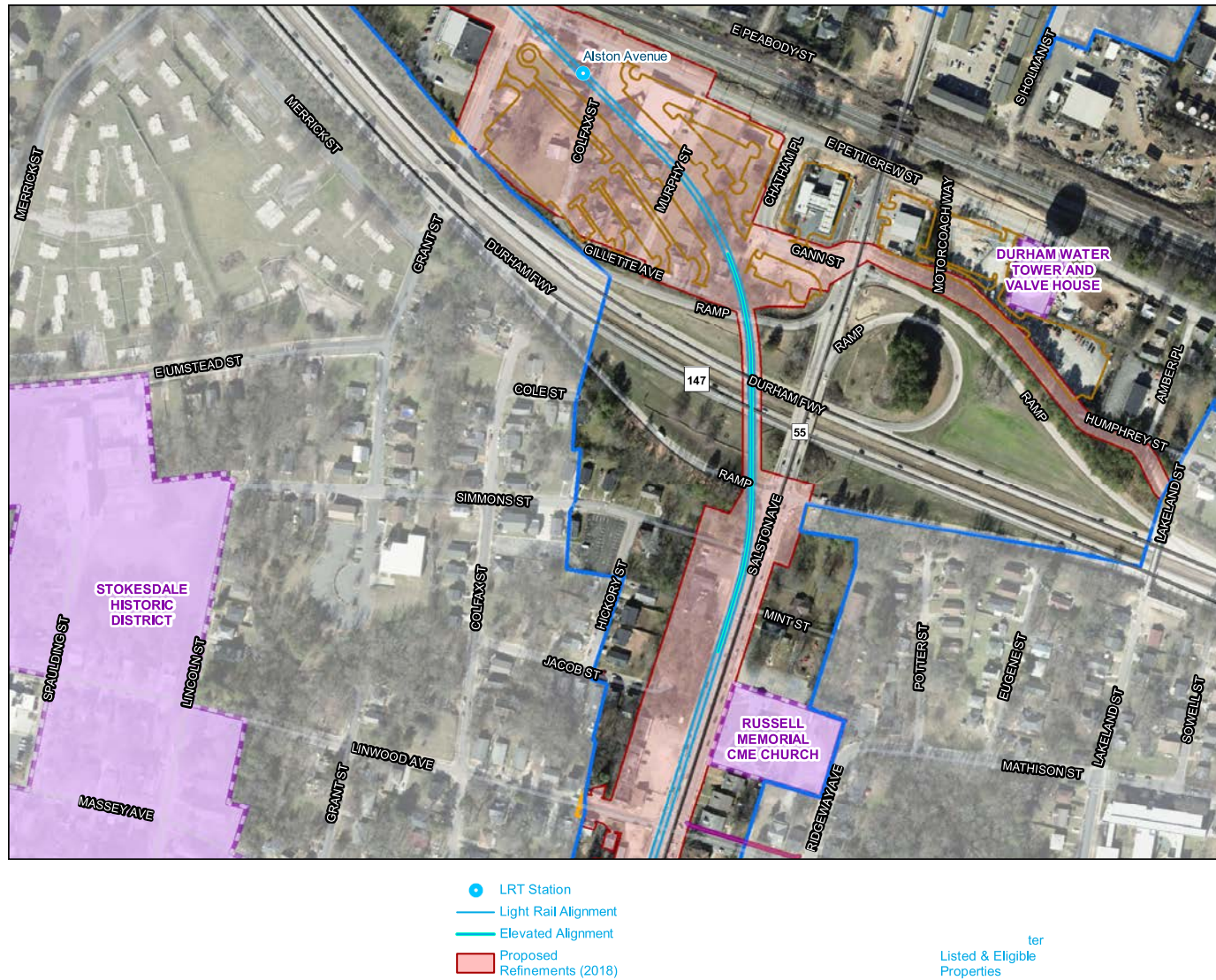


Figure 3-17. Project Location in Durham and Orange Counties, North Carolina, Sheet 16 of 17



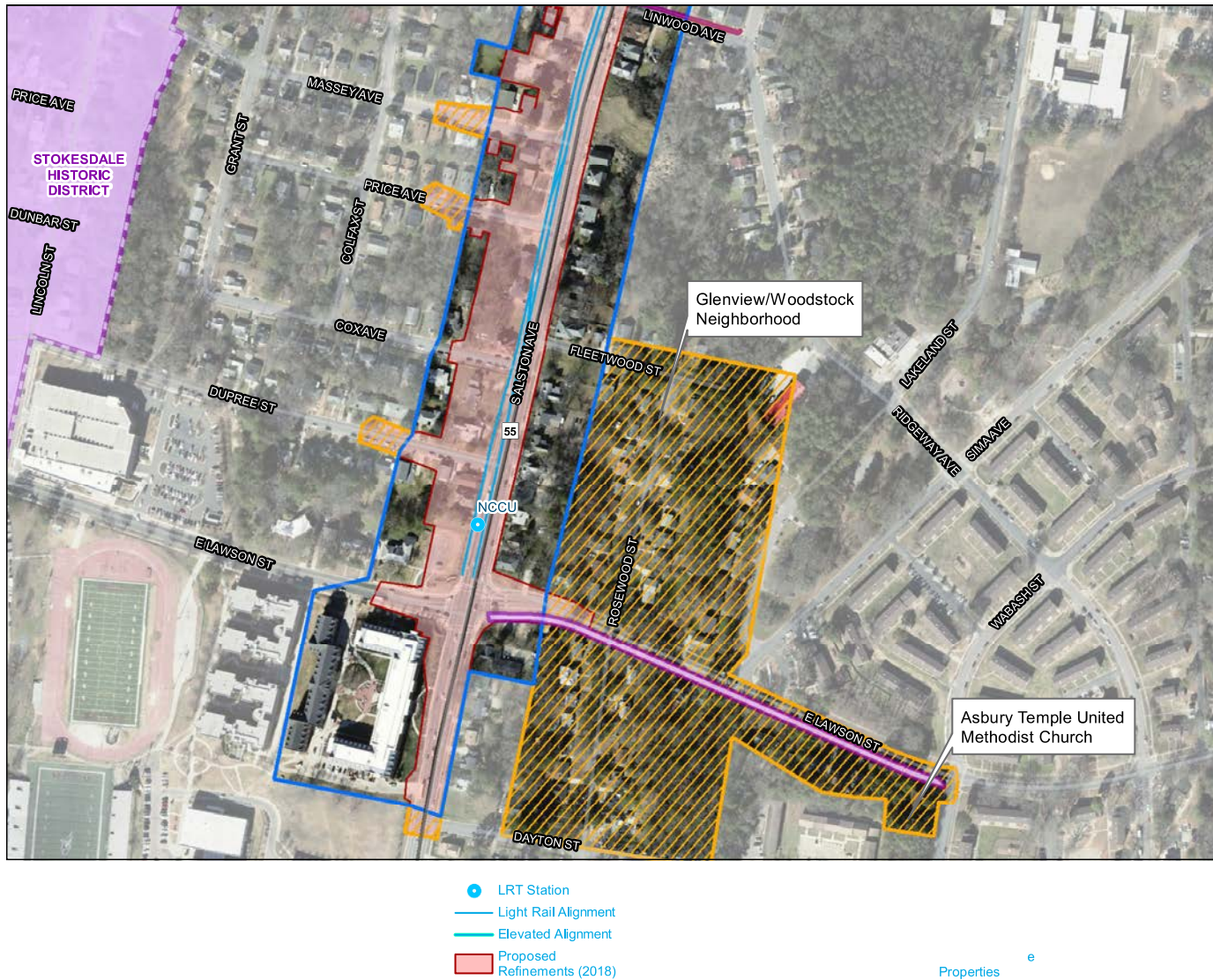


Figure 3-18. Project Location in Durham and Orange Counties, North Carolina, Sheet 17 of 17

## 4. Assessment of Effects

The expansion of the APE resulted in the identification of two new historic properties eligible for the NRHP, described in Section 5.1. An additional 13 historic properties, described in Section 5.2, were previously identified in 2015 and are also located in the expanded APE. These 13 properties are either listed in the NRHP or have been determined eligible for the NRHP by FTA in consultation with the NC SHPO.

The following sections include a description and assessment of effects of the historic properties identified in the area of the Proposed Project Refinements within the expanded APE.

### 4.1 Determination of Effects to Newly Identified NRHP-Eligible Resources in the Revised APE

The expansion of the APE resulted in the identification of two new historic properties eligible for the NRHP, the Glenview/Woodstock Neighborhood (DH 3965) and the Asbury Temple United Methodist Church (DH 3964). The effects of the Proposed Refinements on architectural historic properties within the expanded APE are summarized in Table 5-1.

**Table 4-1. Recommended Effects to Newly Identified NRHP Eligible Historic Properties in the D-O LRT Project Revised APE**

Name	NC SHPO Survey No.	NRHP Determination	Determination of Effect for the Proposed Refinements
Asbury Temple United Methodist Church	DH 3964	Eligible Under Criteria A and B	No Adverse Effect
Glenview/Woodstock Neighborhood	DH 3965	Eligible Under Criterion A	No Adverse Effect

## 4.1.1 Asbury Temple United Methodist Church (DH 3964)



**Figure 4-1. Asbury Temple United Methodist Church (DH 3964), view looking west from E. Lawson Street.**

In consultation with the SHPO, the FTA determined the Asbury Temple United Methodist Church eligible for the NRHP under Criterion A for local social history for its role in the Royal Ice Cream Company sit-in, and Criterion B for its association with the local Civil Rights movement leader Reverend Douglas Moore (Figure 5-1). Asbury Temple United Methodist Church served as a meeting place during preparations for the Royal Ice Cream Company sit-in, establishing this building as a landmark of Durham's Civil Rights Movement. The sit-in was an influential event of the Civil Rights Movement, as it sparked future protests across the state such as the Greensboro sit-ins, which began in 1960. Additionally, Reverend Douglas Moore's leadership of the Royal Ice Cream Company sit-in is widely known and documented, as is the participation of his fellow congregants from Asbury Temple. Moore organized other social justice activities in Durham; however, the Royal Ice Cream sit-in planning and action could be considered his most impactful work.

Constructed in 1954, the Asbury Temple United Methodist Church, the NRHP boundary for the property includes the 0.543-acre tax parcel located at the southwest corner of E. Lawson and Wabash streets in Durham. The northern boundary of the property runs along E. Lawson Street and the public right-of-way.

#### 4.1.1.1 Determination of Effect, Asbury Temple United Methodist Church (DH 3964)

The Proposed Refinements consist of the construction of a 6-foot-wide sidewalk and a 3-foot-wide buffer and retaining wall on the south side of E. Lawson Street from Alston Avenue to Wabash Street (Figures 5-2 to 5-4). The sidewalk is proposed to improve pedestrian access to the NCCU station

There is presently no sidewalk along this segment of E. Lawson Street within the NRHP boundary. The sidewalk will occur partially within the recommended NRHP boundary. The construction and addition of the sidewalk will not result in physical destruction of or damage to the character-defining features that



make the resource eligible for the NRHP. The proposed sidewalk would impact a nominal portion of the NRHP property, with the sidewalk occupying approximately 2.1% of the total acreage. While the proposed sidewalk introduces a new visual element within the viewshed of the church, it is a minimal change and consistent with the church setting, as a sidewalk exists across the street on the northern side of E. Lawson Street. The proposed sidewalk along the north side of the church property would not alter or diminish its association with the historical events or Reverend Moore and the retaining wall will be designed in consultation with the SHPO and the church congregation. Therefore, the Proposed Refinements would have **No Adverse Effect** on the Asbury Temple United Methodist Church.



**Figure 4-2. View of Asbury Temple United Methodist Church (DH 3964), street view showing existing sidewalk along north side of E. Lawson Street and the south side where proposed sidewalk will be located.**

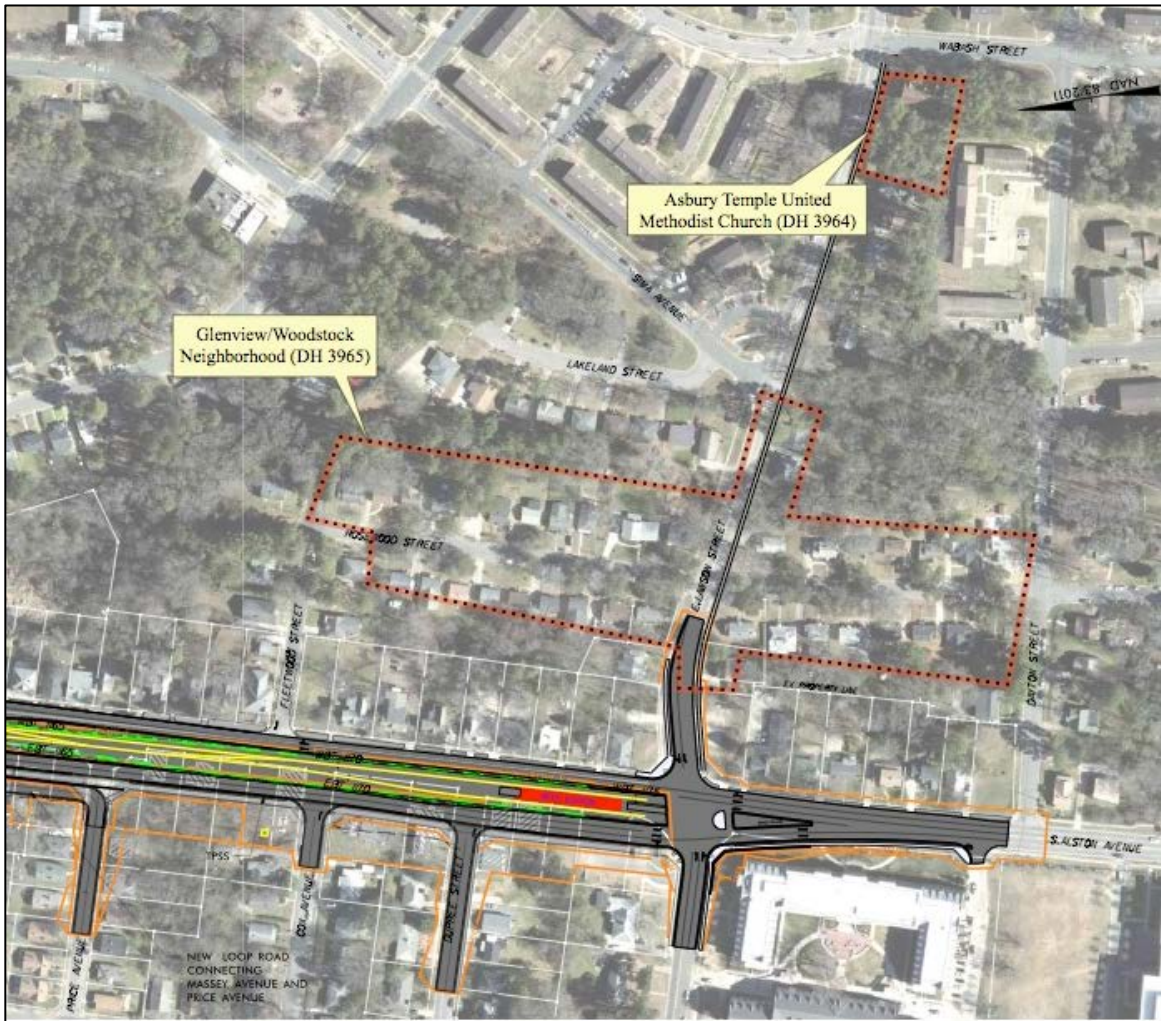


Figure 4-3. Location of Asbury Temple United Methodist Church (DH 3964) in Proximity to Proposed Project Refinements





Source: Bing Maps Hybrid 2018

Figure 4-4. Detail view of Asbury Temple United Methodist Church (DH 3964) in Proximity to Proposed Project Refinements



4.1.2 Glenview/Woodstock Neighborhood (DH 3965)



Figure 4-5. Views of the Glenview/Woodstock Neighborhood along Rosewood Street.

Constructed between 1949 and 1955, the Glenview/Woodstock Neighborhood is a platted Minimal Traditional subdivision containing 22 residences (Figure 5-5). The neighborhood was recommended eligible for the NRHP under Criterion A in the area of social history because it is an African American subdivision developed by a prominent local African American company with the intention of providing the opportunity for Durham’s black middle- and working-class to own their own homes. The Glenview/Woodstock Neighborhood is historically significant because it illustrates how Southeast Durham continued its development, which began after the Civil War, as the nexus of black life in the decades prior to the end of legal racial segregation. The physical appearance of the neighborhood mirrors that of white occupied middle-class subdivisions, yet the community derives its local significance as a platted subdivision built for African Americans by African Americans during segregation.

4.1.2.1 Determination of Effect, Glenview/Woodstock Neighborhood (DH 3965)

The Proposed Refinements consist of the construction of a 6-foot-wide sidewalk and a 3-foot-wide buffer on the south side of E. Lawson Street from Alston Avenue to Wabash Street (Figures 5-6 to 5-8). There is presently no sidewalk along the south side of E. Lawson Street within the NRHP boundary, but a sidewalk is present on the north side of E. Lawson Street. The sidewalk is proposed to improve pedestrian access to the NCCU station.

This work will occur partially within the NRHP boundary and will result in a 6-foot-wide paved sidewalk and 3-foot-wide vegetative buffer area in approximately 1.5% of the 7.5-acre NRHP boundary. The construction and addition of the sidewalk on a small portion of the NRHP boundary would not result in physical destruction of or damage to part of the property containing any character-defining features. Rather, the proposed sidewalk would impact a nominal portion of the NRHP property. It would introduce a new visual element within the viewshed of the district, which already includes a sidewalk on the northern side of E. Lawson Street within the NRHP boundary. The proposed sidewalk along the south side of the E. Lawson Street would not alter or diminish the property’s association with the historical events that make it eligible for the NRHP. Therefore, the proposed project will result in **No Adverse Effect** to the Glenview/Woodstock Neighborhood.

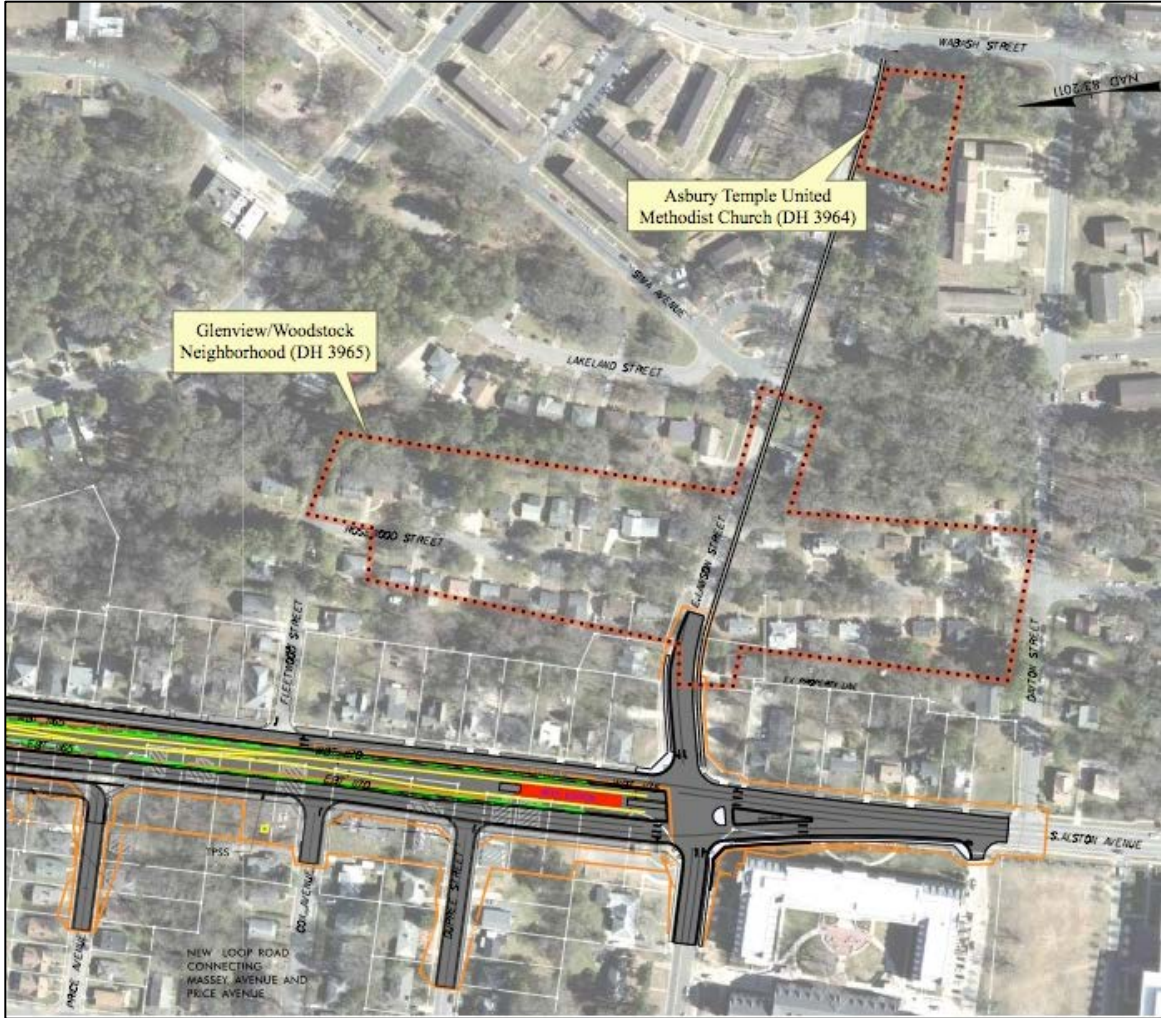


Figure 4-6. Location of Glenview/Woodstock Neighborhood (DH 3965) in Proximity to Proposed Project Refinements



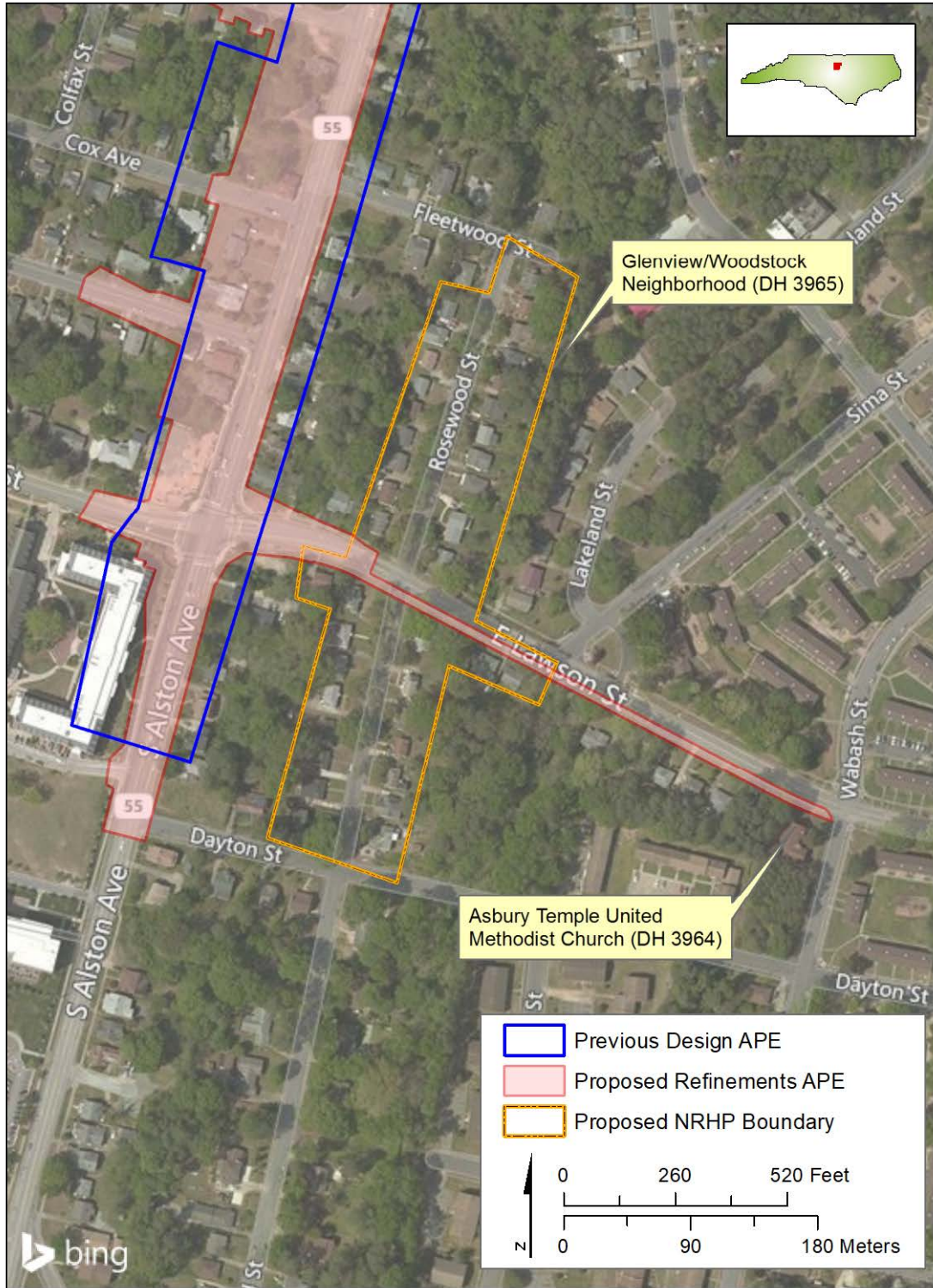


Figure 4-7. Detail of Glenview/Woodstock Neighborhood (DH 3965) in Proximity to Proposed Project Refinements





Figure 4-8. Street view of the Glenview/Woodstock Neighborhood, looking east along E. Lawson Street from west boundary.



Figure 4-9. Street view of the of Glenview/Woodstock Neighborhood, looking west along E. Lawson Street from east boundary.

#### 4.2 Determination of Effects to Previously Identified NRHP-Eligible Resources in the Revised APE

The Proposed Refinements are not anticipated to have adverse effects on the NRHP-listed or eligible resources identified in the 2015 *Historic Architectural Survey Report* (Brown 2015). The effects assessments for these resources were presented in the report titled, *Section 106 Preliminary Assessment of Effects for Historic Properties for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina (Assessment of Effects)* (Brown 2015). NC SHPO concurred with the Assessments of Effects (AOE) report findings in a letter dated January 26, 2016. What follows is a summary of the previously identified NRHP-listed and NRHP-eligible historic properties that now fall within the revised APE. The discussion describes the changes from the Previous Design to the Proposed Refinements, and recommended changes to effects, if any. The locations of the historic properties are presented on APE maps in Figures 4-1 to 4-18. As described below in Table 5-2, the FTA has made a preliminary determination, in consultation with the SHPO, that the Proposed Refinements would have either no effect or no adverse effect on any historic properties within the APE.

**Table 4-2. Recommended Effects to Previously Recorded NRHP Listed and Eligible Historic Properties in the D-O LRT Project Revised APE**

Name (NC SHPO Survey Number)	NRHP Listing or DOE and Date	NRHP Criteria and Significance	Previous Design Effect	Determination of Effect for the Proposed Refinements
H.G. Baity House (OR 2772)	DOE 2015	Determined eligible under Criterion B for its association with sanitation engineer H.G. Baity and Criterion C for its Chateausque-style architecture.	No Effect	No Effect
Walter Curtis Hudson Farm (DH 2373)	DOE 2015	Determined eligible under Criterion C as representative of a small Durham County farmstead of early twentieth century.	No Adverse Effect	No Adverse Effect
Ruth-Sizemore Store (DH 2561)	DOE 2015	Store (not house or pool hall) determined eligible under Criterion A in the area of significance of commerce as representative of a rural Durham County store.	No Adverse Effect	No Adverse Effect

**Table 4-2. Recommended Effects to Previously Recorded NRHP Listed and Eligible Historic Properties in the D-O LRT Project Revised APE**

Name (NC SHPO Survey Number)	NRHP Listing or DOE and Date	NRHP Criteria and Significance	Previous Design Effect	Determination of Effect for the Proposed Refinements
Smith Warehouse (DH 89)	NRHP listed 1985	Significant under Criteria A, B, and C for connection with American Tobacco Company trust and economic role in Durham; association with James B. Duke and other American Tobacco Company executives; and for architecture.	No Adverse Effect	No Adverse Effect
Duke Memorial United Methodist Church (DH 1253)	NRHP listed 1985	Significant under Criteria A, B, and C for association with rapid growth of western Durham and many tobacco workers in congregation; association with Washington Duke and sons; and for architecture.	No Adverse Effect	No Adverse Effect
North Carolina Mutual Building (DH 2477)	DOE 2015	Determined eligible under Criterion A in the area of African-American ethnic history for association with North Carolina Mutual Insurance Company.	No Adverse Effect	No Adverse Effect
W.T. Blackwell & Co. Building (Bull Durham Tobacco Factory) (DH 0010)	National Historic Landmark, designated 1977, listed in NRHP in 1974	Appears to have been listed under Criterion A in areas of commerce and industry	No Adverse Effect	No Adverse Effect
American Tobacco Company Manufacturing Plant (DH 1872)	NRHP Listed 2000	Significant under Criteria A and C, and Criterion Consideration G in the areas of industry and architecture	No Adverse Effect	No Adverse Effect

**Table 4-2. Recommended Effects to Previously Recorded NRHP Listed and Eligible Historic Properties in the D-O LRT Project Revised APE**

Name (NC SHPO Survey Number)	NRHP Listing or DOE and Date	NRHP Criteria and Significance	Previous Design Effect	Determination of Effect for the Proposed Refinements
Downtown Durham Historic District (DH 1692)	NRHP Listed 1977, updated 2012	Significant under Criteria A and C in the areas of architecture, commerce, community planning and development, entertainment/recreation politics/government, and religion	No Effect	No Adverse Effect
Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH 1067)	DOE 1999	Determined eligible under Criterion A in area of significance of transportation and Criterion C for design.	No Adverse Effect	No Adverse Effect
Venable Tobacco Company Warehouse (DH 97)	NRHP listed 1985	Significant under Criterion A in the area of industry and Criterion C in the area of architecture.	No Adverse Effect	No Adverse Effect
Durham Water Tower and Valve House (DH 3508)	DOE 2015	Determined eligible under Criterion A for association with activities of Federal Emergency Administration of Public Works in Durham and Criterion C for water tower design.	No Adverse Effect	No Effect
Russell Memorial CME Church (DH 3663)	DOE 2016	Significant under Criterion C in the area of architecture.	No Adverse Effect	No Adverse Effect



## 4.2.1 H.G. Baity House (OR 2772)



**Figure 4-10. H.G. Baity House (OR 2772)**

The H.G. Baity House is located at 1503 Baity Hill Drive in Chapel Hill on the campus of the University of North Carolina (Figure 5-10). The FTA previously determined that the house is eligible for listing in the National Register under Criterion B for its association with Dr. Herman Glenn “H.G.” Baity (1895-1975). Baity was the most important figure in the early/mid-twentieth-century history of sanitary engineering in North Carolina. He was also internationally known for his work in South America in the 1940s and throughout the world during his ten years (1952-1962) as the director of environmental sanitation at the World Health Organization. The FTA also determined that the H.G. Baity House is National Register eligible under Criterion C for its architecture. Neatly finished inside and out, the house is an excellent example of mid-20th-century Chateausque-style architecture. Its surviving original associated features—a dovecote, an openwork brick wall, and well-groomed and still bucolic grounds—support the architectural significance of the house. The most notable alteration to the house, the replacement of its sash, is outbalanced by its many other intact original features and it therefore has sufficient integrity to support its eligibility under Criterion C. The house is not known to be associated with any important historic event and is unlikely to yield any important historical information not readily available from other sources. The FTA therefore determined that it was not NR eligible under Criteria A or D.

The National Register-eligible boundaries for the Baity House encompass the grassy hill that the house and its dovecote, driveway, and grounds occupy within the rough circle of Baity Hill Drive. This property is the only undeveloped and still recognizably historic portion of the 54-acre parcel originally associated with the house. It encompasses approximately four acres of the nine-acre parcel (PIN 9788717979) that the University purchased, along with the Baity House, in 1991. The other five acres of the parcel and adjacent parcels now hold five modern apartment buildings and are accordingly excluded from the proposed Register-eligible boundaries. The other 45 acres of property initially associated with the house, which contain various modern university resources including the Dean Smith Center, are excluded as well.

#### 4.2.1.1 Determination of Effect, H.G. Baity House (OR 2772)

The Previous Design would have no effect on the resource. The setting of the H.G. Baity House is no longer intact beyond its National Register-eligible boundaries, for it is dominated by the five multi-story apartment buildings that ring the house and its grounds. The Proposed Refinements consist of realigning



the existing sidewalk on the east side of Baity Drive due to the road improvements and adding a full length of parallel 5-foot sidewalk on the west side in front of the H.G. Baity House (Figure 5-11). The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Effect** on the H.G. Baity House.



Figure 4-11. H.G. Baity House, proposed project plans

4.2.2 Highland Woods Historic District (OR 1460)



Figure 4-12. Highland Woods Historic District (OR 1460), representative examples

The FTA previously determined that the 1950s-era Highland Woods Historic District is eligible for listing in the National Register under Criterion A within the area of community planning and development, which the Register defines as the “practical art of designing and changing the physical structure of communities to enhance the quality of life.” Its combination of cooperative housing, which was intended to create reasonably priced homeownership and a close sense of community, with modernist architecture, which was intended to project the progressive ideals of the cooperative members who chose to be neighbors and friends, is an excellent representative of this area of significance (Figure 5-12). The FTA also determined that Highland Woods is eligible for National Register listing under Criterion C, as a historic district, for its intact and often architect-designed Mid-Century Modernist architecture. However, the FTA determined that none of Highland Woods’ houses are individually eligible for National Register listing under Criterion C for, within the context of the many intact modernist houses in Chapel Hill, none are sufficiently architecturally significant to merit such listing. The historic district’s period of significance extends from 1956, when the land was purchased by the cooperative and the plat map was drawn, until 1965, when the final of its original 25 houses was erected. The FTA determined the historic district is not eligible under Criteria B or D. The National Register-eligible boundaries for the Highland Woods Historic District are those of the 26 parcels—the 25 house parcels and the community lot parcel—that are included within the subdivision, all of which front on Highland Woods Road. They also include that portion of Highland Woods Road that runs in front of these resources. This is all of the property that has been historically associated with the neighborhood since its creation and encompasses approximately 25.5 acres.

4.2.2.1 Determination of Effect, Highland Woods Historic District (OR 1460)

The Previous Design would have no adverse effect on the resource. Proposed improvements consist of a multi-use path between the rail tracks and the historic district, but not within the historic district boundary (Figure 5-13). The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Highland Woods Historic District.

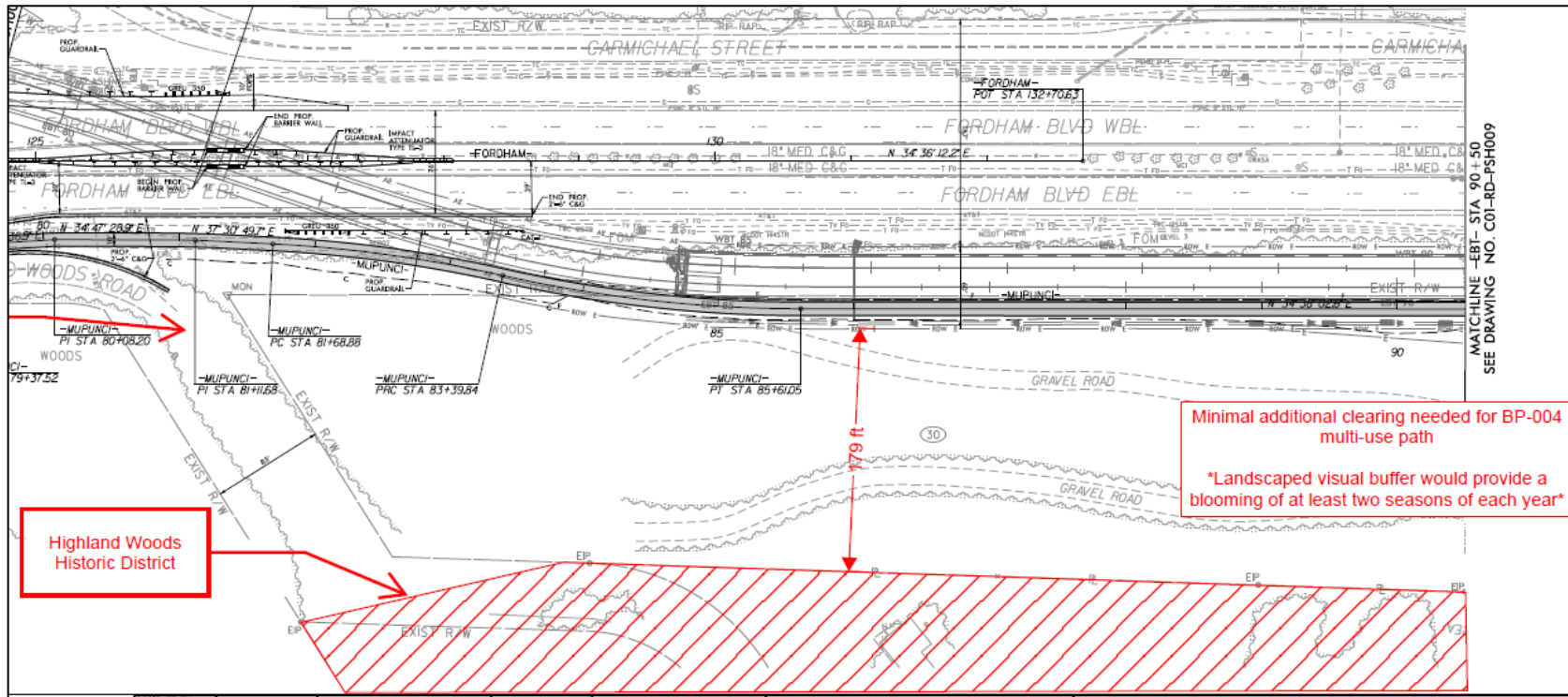


Figure 4-13. Highland Woods Historic District, proposed project plans



#### 4.2.3 Walter Curtis Hudson Farm (DH 2373)



**Figure 4-14. Walter Curtis Hudson Farm (DH 2373)**

The Walter Curtis Hudson Farm is located at 5117 Farrington Road in Durham County (Figure 5-14). The FTA previously determined as a result of the D-O LRT project that the farm is National Register eligible under Criterion C as an excellent and intact example of a small Durham County farmstead of the early twentieth century. In addition to its c. 1918 house, it includes a c. 1918 milkhouse/washhouse and garage, which retain original gutters and charcoal filtration systems that feed into an underground cistern; an early woodshed and brooder house; a c. 1935 log playhouse complete with a goldfish pond and decorative plantings; and a c. 1946 shop and 1960 barn. This large collection of buildings is quite intact within a bucolic setting, particularly in a section of eastern Durham and western Orange counties that has undergone rapid development in the past 20 years. The resource has no known connection with historic events or significant persons, and is unlikely to yield important information not readily available from other sources. It was therefore not found to be National Register-eligible under Criteria A, B, or D. The farm's period of significance extends between 1918 and 1960, the dates of construction of its individual contributing resources.

The Walter Curtis Hudson Farm includes the house Hudson built and the outbuildings to its north and east, most of which he also built. They stand on an approximately 15-acre parcel of land that is open yard and pasture, but for some trees along the entry drive and to the house's immediate rear. Farrington Road passes to the west of the tract, and a wooded parcel and I-40 extend to the east. The National Register-eligible boundaries include all but the upper northeastern portion of Parcel 141555. This parcel, upon which the Walter Curtis Hudson House and associated outbuildings stand, encompasses approximately 15.2 acres and the excluded northeastern corner about 1.2 acres. Therefore, the total land within the boundaries encompasses approximately 14 acres. The boundary excludes a store and five other resources to its north associated with the store property.

#### 4.2.3.1 Determination of Effect, Walter Curtis Hudson Farm (DH 2373)

The Walter Curtis Hudson Farm is adjacent to the proposed Rail Operations and Maintenance Facility (ROMF). The Previous Design would have no adverse effect on the historic district. The Proposed Refinements would require a subsurface easement for tiebacks associated with a soil nail retaining wall, which will be used to retain the earth between the historic district and the trackway and reduce the amount of property needed in proximity to the historic district (Figures 5-15 to 5-18). The subsurface easement would be greater than 350 feet from the closest contributing resource of the district. The construction of the track would require clearing, but the clearing would not affect any contributing resource or elements that contribute to the features that make the historic district NRHP-eligible. Additionally, there are no heritage trees in this area. The project refinement would include the addition of new vegetative buffers and other landscape mitigation. The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Walter Curtis Hudson Farm.

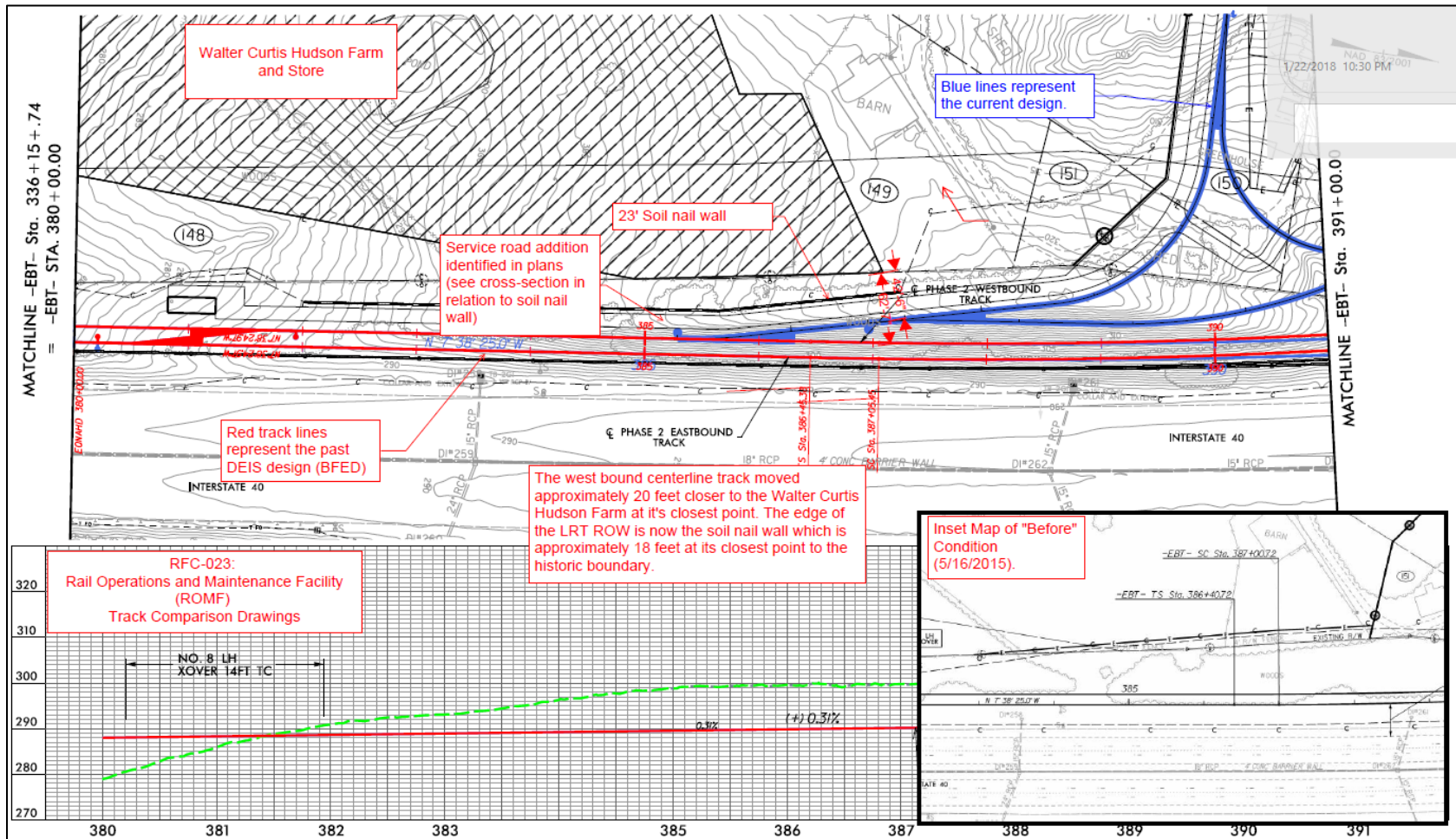


Figure 4-15. Walter Curtis Hudson Farm and Store, proposed project plans



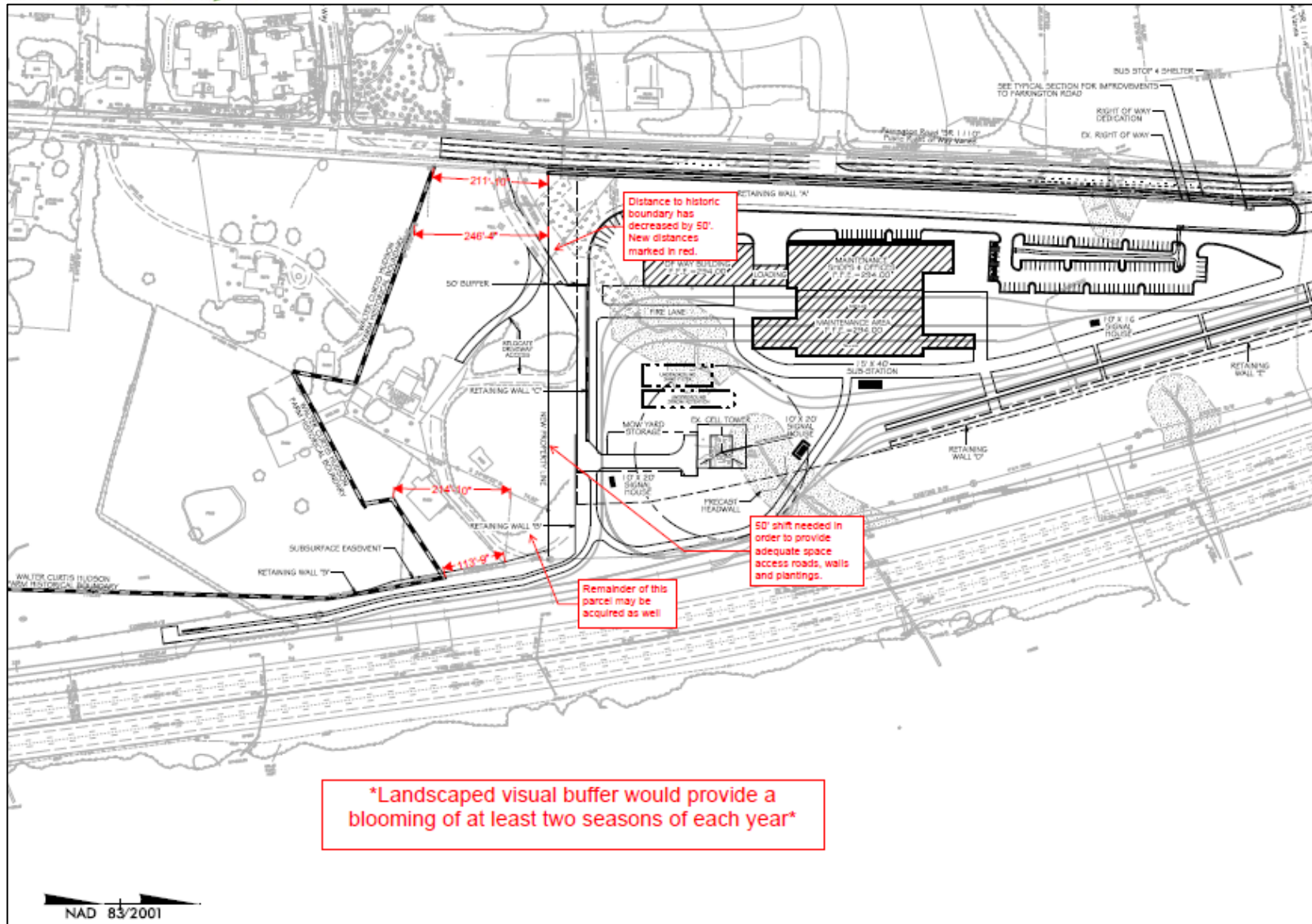


Figure 4-16. Walter Curtis Hudson Farm and Store, proposed project plans



Figure 4-17. Walter Curtis Hudson Farm and Store, proposed project plans

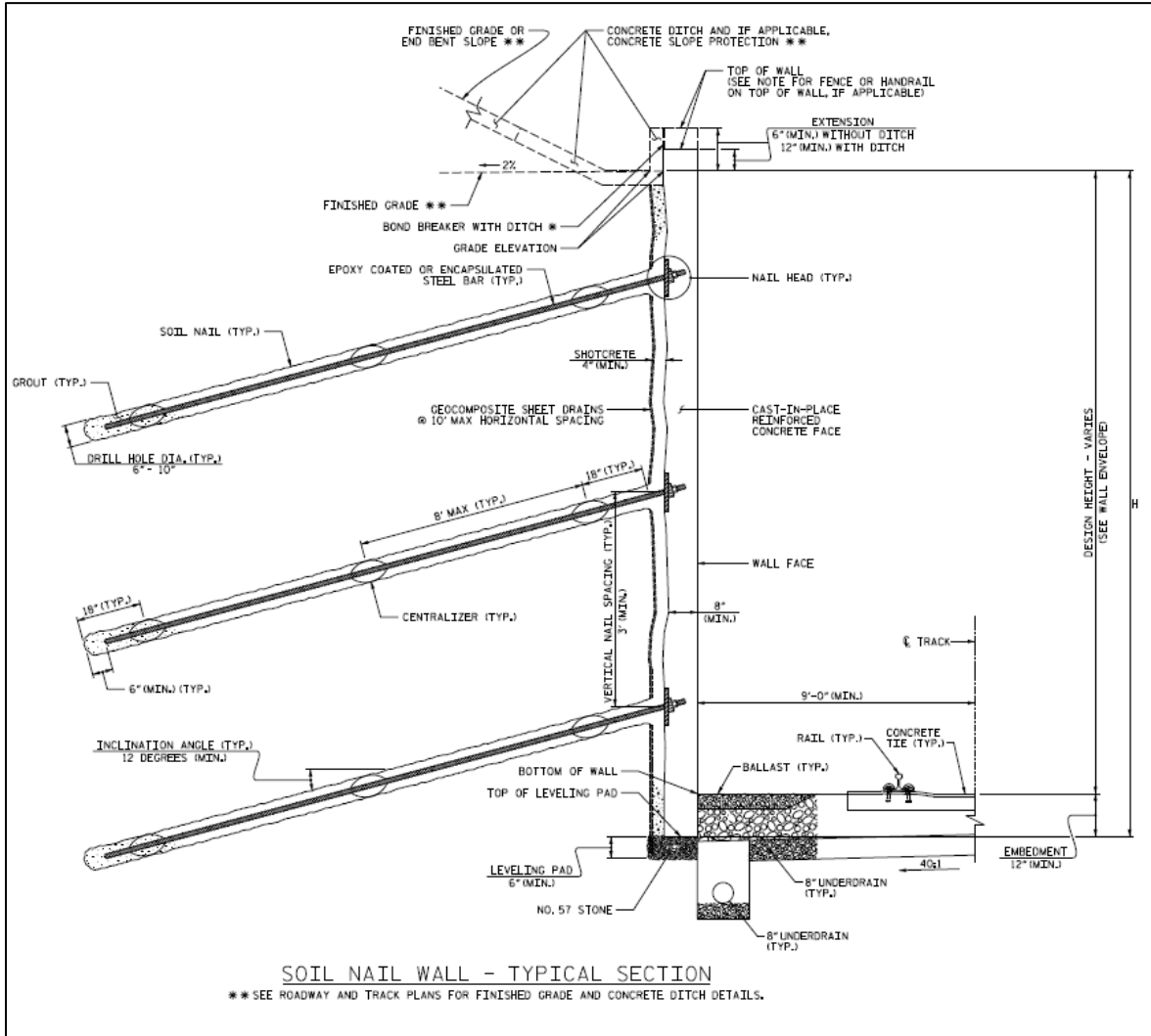


Figure 4-18. Walter Curtis Hudson Farm and Store, proposed project plans



## 4.2.4 Ruth-Sizemore Store (DH 2561)



Figure 4-19. Ruth-Sizemore Store (DH 2561)

The Ruth-Sizemore Store, which was built in the mid-1920s, is located at 5520 Old Chapel Hill Road in Durham County (Figure 5-19). The FTA previously determined that the store is National Register eligible under Criterion A in the area of significance of commerce as a rare surviving representative of a rural Durham County store. The store has no known connection with significant persons, is not architecturally notable, and is unlikely to yield important information not readily available from other sources. It is therefore not National Register eligible under Criteria B, C, or D.

The store stands on a 4.31-acre parcel at the northeast corner of the intersection of Old Chapel Hill Road (Old Durham Road) and North White Oak. Adjacent to its east on the parcel is a former pool hall, erected in the late 1920s or 1930s. A small house, built about 1910, stands to its north on the parcel. Both of these resources have lost their integrity. Therefore, they are not individually National Register eligible and do not contribute to the store as part of a potential historic district. The recommended National Register boundaries for the Ruth-Sizemore Store encompass a parallelogram of a less-than 0.1-acre portion of the parcel. This boundary extends to the crossroads intersection that was an important element of the store's success, and excludes the house and former pool hall.

#### 4.2.4.1 Determination of Effect, Ruth Sizemore Store (DH 2561)

The Previous Design would have no effect on the resource. The recommended changes associated with the Proposed Refinements would move the alignment slightly closer to the historic resource; however, the alignment would still be approximately 200 feet away from the closest contributing element (Figure 5-20). The roadway would shift slightly with the Proposed Refinements. The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Ruth-Sizemore Store.

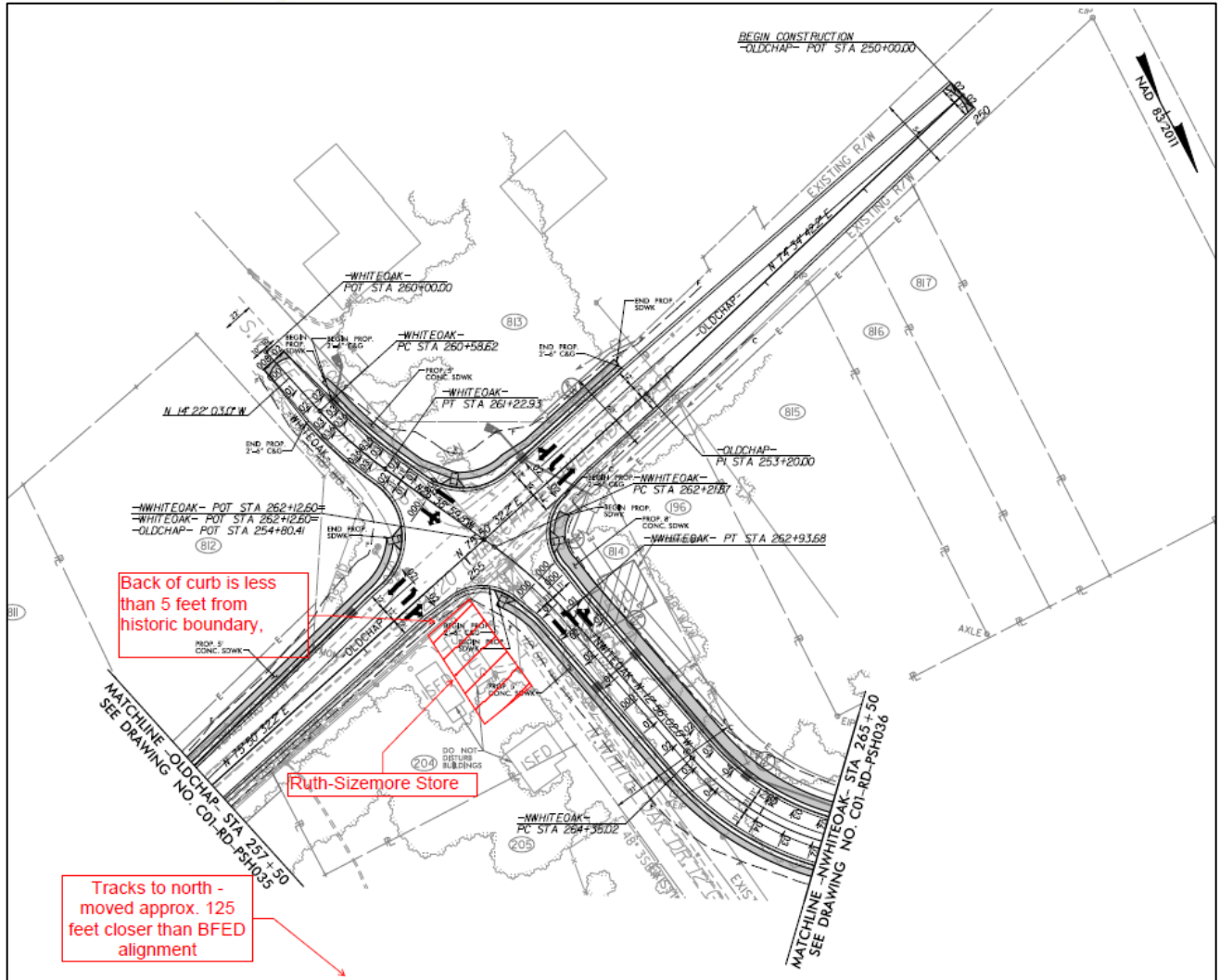


Figure 4-20. Ruth-Sizemore Store, proposed project plans



Figure 4-21. Smith Warehouse (DH 89)

The Smith Warehouse, which stands at 114 South Buchanan Boulevard in Durham, was listed in the National Register in 1985 (Figure 5-21). It was determined eligible for listing on the National Register under Criteria A, B, and C for its connection with the American Tobacco Company trust; its economic role in Durham; its association with James B. Duke and other American Tobacco Company executives; and its architecture. The FTA previously determined that the warehouse retains its integrity.

The National Register boundaries of the Smith Warehouse encompass approximately 5 acres. The historic resource includes the large former tobacco warehouse and the remainder of its parcel, which is paved parking lots north and south of the building. To the north of the boundaries are additional parking lots and the 1854 NCRR alignment. To the south are more parking lots and NC 147.

#### 4.2.5.1 Determination of Effect, Smith Warehouse (DH 89)

The Previous Design would have no adverse effect on the resource. The Proposed Refinements would require a realignment of the existing five-foot sidewalk adjacent to the warehouse on the west side of the street (Figure 5-22). The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Smith Warehouse.





Figure 4-22. Smith Warehouse, proposed project plan

#### 4.2.6 Duke Memorial United Methodist Church (DH 1253)



Figure 4-23. Duke Memorial United Methodist Church (DH 1253)

Memorial United Methodist Church, which is located at 504 West Chapel Hill Street in Durham, was listed in the National Register in 1985 (Figure 5-23). According to its National Register nomination, it was determined eligible for listing under Criterion A for its association with the rapid growth of western Durham and the many tobacco workers in its congregation; under Criterion B for its association with Washington Duke and his sons; and under Criterion C for its Gothic and Romanesque Revival-style architecture per the National Register nomination for this property. The FTA previously determined that the church retains its integrity.

The National Register boundaries of the Duke Memorial United Methodist Church encompass approximately three acres. The church is located in a heavily built-up setting of commercial, governmental, office, industrial, and transportation-related buildings and facilities. The 1854 NCRR alignment is separated from it to the north by parking lots, a modern office building, and two buildings erected in the 1950s. North of the NCRR alignment is downtown Durham. To the west of the church and its boundaries are buildings erected in the middle half of the twentieth century and entrance ramps to NC 147. On its south are a large multi-story apartment complex erected in 2014 and the 1950s multistory Durham police headquarters building. A modern office building, the National Register-eligible mid-1960s North Carolina Mutual tower, and a c. 1995 concrete-block warehouse stand to its east. Just beyond them is Durham's modern multi-modal transit center, erected c. 2008.

##### 4.2.6.1 Determination of Effect, Duke Memorial United Methodist Church (DH 1253)

The Previous Design would have no adverse effect on the resource. The Proposed Refinements would require a change to the sidewalk profile in front of the church. The profile will be lowered to match the profile of the new lowered roadway. In order to create a lower profile sidewalk, a taller retaining wall will be required on the west side of the street abutting the church property (Figure 5-24). The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Duke Memorial United Methodist Church.



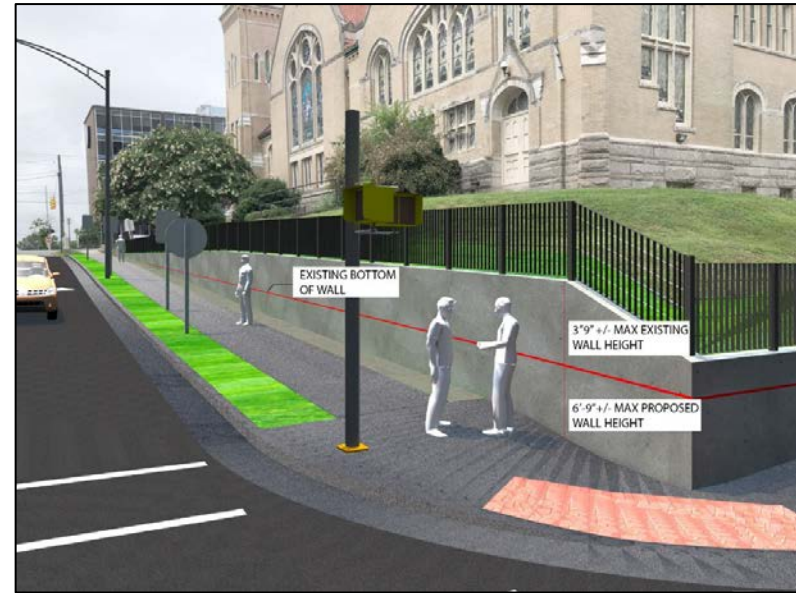


Figure 4-24. Duke Memorial United Methodist Church, proposed project renderings showing proposed changes in retaining wall along South Duke Street (looking north, left; looking south, right)



#### 4.2.7 North Carolina Mutual Building (DH 2477)



**Figure 4-25. North Carolina Mutual Building (DH 2477)**

The North Carolina Mutual Building is located at 411 West Chapel Hill Street in Durham (Figure 5-25). The FTA determined that the building is National Register eligible under Criterion A for its history. It is nationally significant under this criterion in the area of African-American ethnic history as a landmark of African-American enterprise in the late twentieth century. The FTA previously determined that the North Carolina Mutual Building was not eligible under Criteria B; C, and D due to its lack of significance in these areas. The North Carolina Mutual Building's period of significance is 1964-1966, when it was designed, constructed, and opened.

The National Register-eligible boundaries of the North Carolina Mutual Building are those of Durham County parcel 103343, with which it has been associated since its construction. They encompass approximately 3.3 acres and include the building, the decorative pools and sign on the south front lawn, and the contemporary parking deck that occupies much of the southeastern portion of the property. The North Carolina Mutual Building is located in a heavily built-up setting of commercial, governmental, office, industrial, and transportation-related buildings and facilities. The 1854 NCRR alignment is separated from the property to the north by modern office buildings and a concrete-block warehouse. North of the tracks is downtown Durham. To the building's west are the Duke Memorial United Methodist Church and the mid-1950s high-rise Durham police headquarters building. Beyond these are a modern, multistory apartment block and the entrance ramps to NC 147. To the south are multi-story office buildings erected in the last quarter of the twentieth century and, to the east, Durham's modern multi-modal transit center.

##### 4.2.7.1 Determination of Effect, North Carolina Mutual Building (DH 2477)

The Previous Design would have no adverse effect on the resource. The Proposed Refinements would require a change to the sidewalk profile in front of the building (Figure 5-26). The profile will be lowered to match the profile of the new lowered roadway. In order to create a lower profile sidewalk, a taller retaining wall will be required along the west side of the property. The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the North Carolina Mutual Building.



**Figure 4-26. North Carolina Mutual Building, streetview showing area where proposed retaining wall height will be increased**

#### 4.2.8 American Tobacco Company Manufacturing Plant (DH 1872 and DH 10)



**Figure 4-27. American Tobacco Company Manufacturing Plant (DH 1872 and DH 10)**

The American Tobacco Company Manufacturing Plant was listed on the National Register in 2000 (Figure 5-27). It was determined eligible under Criterion A in the area of industry, as symbolizing the history of the tobacco industry in Durham and under Criterion C in the area of architecture for its notable industrial design. Included within the National Register boundaries of American Tobacco is the W.T. Blackwell and Co. (Bull Durham) Tobacco Factory (DH-10), which was identified as a National Historic Landmark (NHL) in 1974 for its significance as the first successful tobacco manufacturing company in North Carolina. The FTA previously determined that the American Tobacco Company Manufacturing Plant and the W.T. Blackwell and Co. (Bull Durham) Tobacco Factory retain their integrity. The approximately 17-acre factory complex occupies the Durham block bounded by West Pettigrew Street on the north, Blackwell Street on the east, Willard Street on the south, and Julian Carr Street on the west.

The northern boundaries of the American Tobacco Company Manufacturing Plant and the W.T. Blackwell and Co. (Bull Durham) Tobacco Factory front on West Pettigrew Street and, just beyond, the 1854 NCRR alignment and the historic core of downtown Durham. On American Tobacco's southern boundary are Willard Street and NC 147. To the west are warehouses, a parking deck, and parking lots. The modern Durham Bulls Athletic Park and Durham Performing Arts Center stand to the east. The area is densely urban with industrial, commercial, office, governmental, and transportation-related buildings and facilities.

##### 4.2.8.1 Determination of Effect, American Tobacco Company Manufacturing Plant (DH 1872 and DH 10)

The Previous Design would have no adverse effect on the resource. The Proposed Refinements consist of the construction of a signature civic space connecting Ramseur Street to the north with Pettigrew Street to the south, where the Blackwell/Mangum Street Rail Station will be located (Figures 5-28 and 5-29). The signature civic space will be located near the center of the block between Blackwell and South Mangum streets approximately 180 feet to the southeast of the American Tobacco Company Manufacturing Plant district. Additionally, in order to accommodate the new station, Pettigrew Street would be shifted south approximated 10 feet and sidewalk alignment changes would occur as well. The FTA's preliminary determination is the proposed signature civic space will have **No Adverse Effect** on the American Tobacco Company Manufacturing Plant district. The proposed signature civic space will be designed in consultation with the NC SHPO using community input through an open public process.



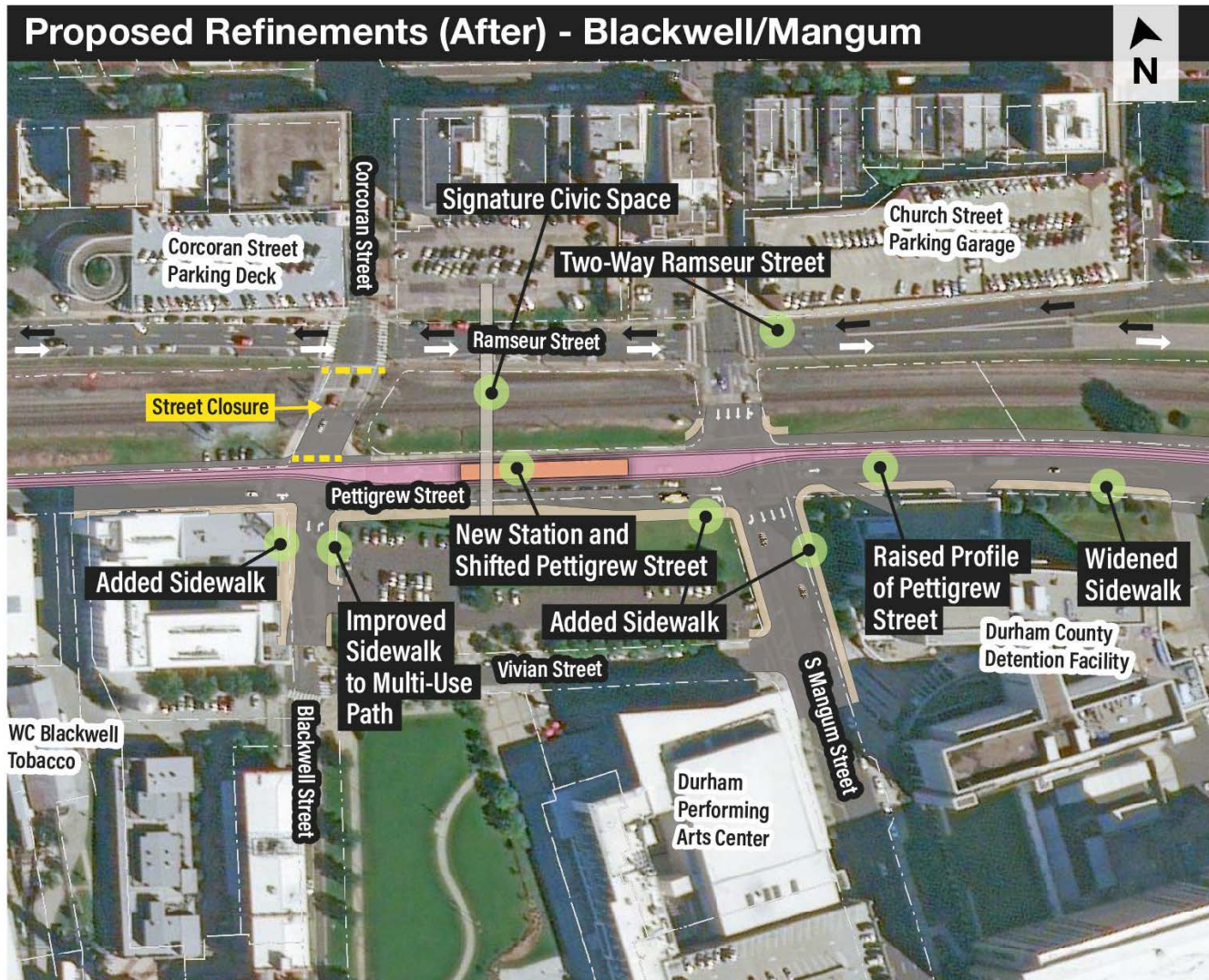


Figure 4-28. Proposed Signature Civic Space plans in area of American Tobacco Company Manufacturing Plant/Bull Durham Tobacco Company/W.T. Blackwell and Company Building



**Figure 4-29. Proposed Signature Civic Space in area of American Tobacco Company Manufacturing Plant/Bull Durham Tobacco Company/W.T. Blackwell and Company Building**

#### 4.2.8.2 Alternatives Considered

GoTriangle explored multiple alternatives to address the bicycle/pedestrian access and connectivity at this location while minimizing impacts to the W.T. Blackwell & Co Building. These alternatives included:

- Aerial alignment of the LRT along Pettigrew Street – this alternative was found to not be cost effective and was found to have visual aspect in proximity to the W.T. Blackwell & Co. Building;
- Closure of Blackwell Street with at-grade street connections - For this alternative vehicles would be re-routed along two-way Ramseur Street to alternative north/south roads and pedestrians could be re-routed to one-way southbound Mangum Street; however traffic volume is considered unsafe because there is not a separate sidewalk or bicycle facility and there is no viable and proximate alternative for bicyclists heading north.
- Blackwell Street one-way southbound – this alternative still presented a signal timing issue at the crossing and would require raising Pettigrew Street approximately 4 feet. This would result in 4'-8' retaining walls outside W.T. Blackwell & Co. Building, and therefore did not meet the goal of minimizing impacts to it.
- Pedestrian/bicycle underpass – this alternative would pass under both the freight rail line and the LRT to maintain connectivity. However, the underpass would be an undesirable length for perceived pedestrian security. In addition, it would require complex construction under the railroad and could cause potential foundation issues for historic buildings adjacent to the underpass, including the W.T. Blackwell & Co. Building.



#### 4.2.9 Downtown Durham Historic District (DH 1692)



**Figure 4-30. Downtown Durham Historic District (DH 1692)**

The Downtown Durham Historic District was listed in the National Register in 1977 (Figure 5-30). Its areas of significance were identified as architecture, commerce, politics/government, religion, and theater. The FTA previously determined that the historic district retains its integrity. The district is the core of historic downtown Durham and largely contained by the roadway loop that rings this core. It is roughly bounded by West Morgan, East Seminary, and East Parrish streets on the north, North Roxboro and North Queen streets on the east, Ramseur Street on the south, and Great Jones and West Morris streets on the west. Contained within its approximately 65 acres are more than 175 resources, almost all of which are commercial, governmental, religious, and other nonresidential multi-story buildings.

##### 4.2.9.1 Determination of Effect, Downtown Durham Historic District (DH 1692)

The Previous Design would have no effect on the resource. The Proposed Refinements consist of the construction of a signature civic space connecting Ramseur Street to the north with Pettigrew Street to the south, where the Blackwell/Mangum Street Rail Station will be located (Figures 5-28 and 5-29). The signature civic space will be located near the center of the block between Blackwell and South Mangum streets. The north end of the signature civic space will be located on the southern boundary of the district. The FTA's preliminary determination is the proposed signature civic space will have **No Adverse Effect** on the Downtown Durham Historic District. It will be designed in consultation with the NC SHPO using community input through an open public process.



4.2.10 Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH 1067)



**Figure 4-31. Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH1067)**

Southern Railway Bridge (Seaboard Coastline Railroad Overpass) carries railroad tracks over South Roxboro Street at East Pettigrew Street in Durham (Figure 5-31). It was determined eligible for National Register listing in 1999 under Criterion A in the area of transportation and under Criterion C for its design. The bridge is part of the 1854 NCR alignment, although it was built as part of a grade separation program in the 1929. The FTA previously determined that it retains its integrity.

The Southern Railway Bridge does not have any precisely delineated boundaries. The land it stands on has no parcel number and is flanked to the east and west by, but separate from, parcel 215183, which is owned by the NCR. The bridge’s boundaries likely encompass its footprint, including its wingwalls. The bridge is located in a dense urban setting that includes industrial, commercial, office, governmental, and transportation-related buildings and facilities.

**4.2.10.1 Determination of Effect, Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH1067)**

The Previous Design would have no adverse effect on the resource. The Proposed Refinement would add a center platform station near the DPAC located between Blackwell Street and Mangum Street (Figure 5-32). In order to accommodate the proposed new station, Pettigrew Street would be shifted southward approximately 10 feet toward DPAC. Sidewalk alignment changes would occur as a result of the shifting of the street. The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The Proposed Refinements would have **No Adverse Effect** on the Southern Railway Bridge.

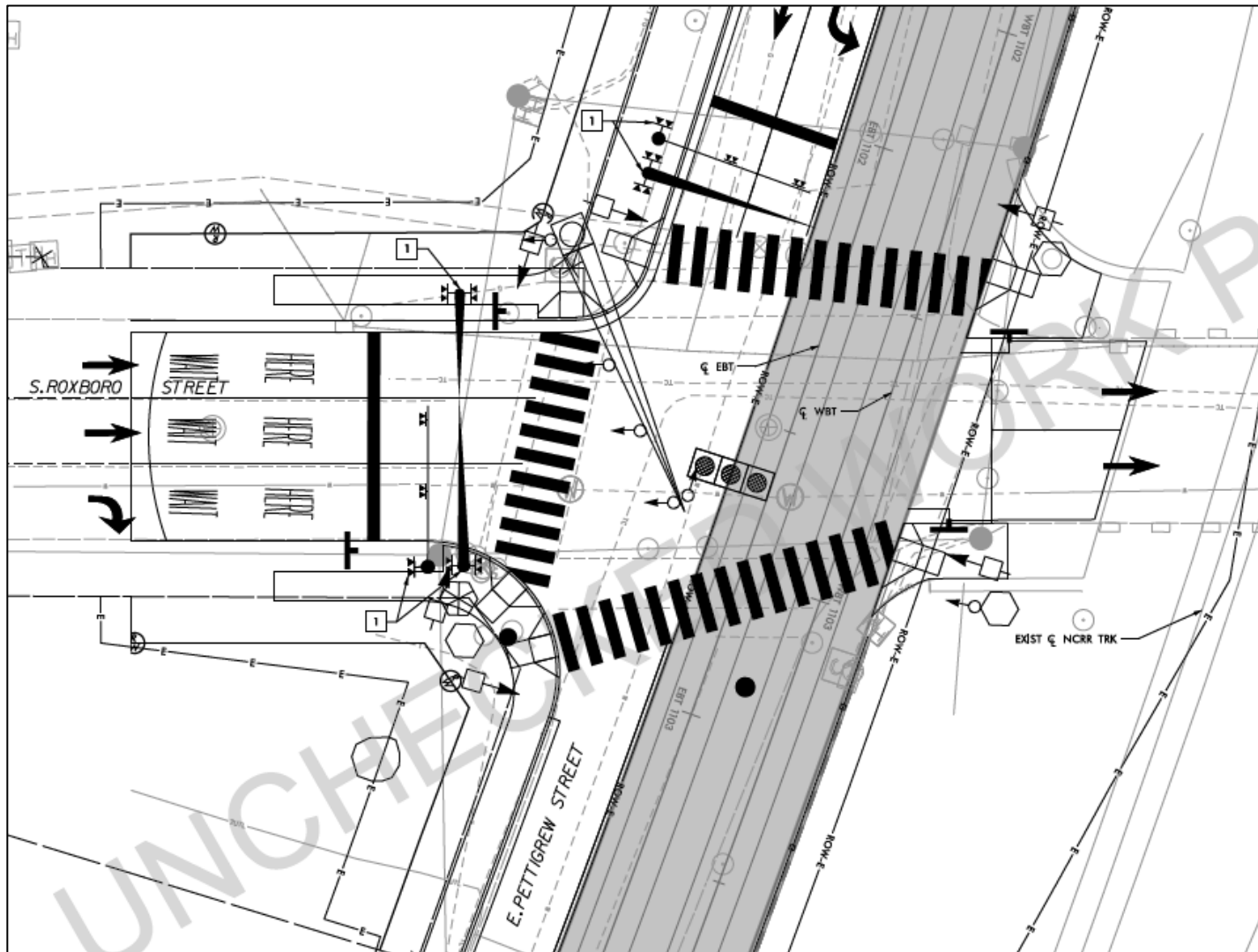


Figure 4-32. Proposed project plans in area of Southern Railway Bridge (Seaboard Coastline Railroad Overpass) (DH 2504 and DH1067)

#### 4.2.11 Venable Tobacco Company Warehouse (DH 97)



**Figure 4-33. Venable Tobacco Company Warehouse (DH 97)**

The Venable Tobacco Company Warehouse was listed in the National Register in 1985 (Figure 5-33). It was determined eligible for listing in the National Register under Criterion A in the area of industry for its association with Durham’s tobacco industry and Criterion C in the area of architecture for its handsome slow-burn design. The former warehouse is located at 302-304 East Pettigrew Street in Durham. Its National Register boundaries encompass just under one acre. The FTA previously determined that the warehouse retains its integrity.

The warehouse is built almost up to a sidewalk and East Pettigrew Street at its north. Immediately north of Pettigrew Street is the 1854 NCRR alignment and the historic core of downtown Durham. To the warehouse’s east is the Venable Tobacco Company Prizery and parking lots. Parking lots and car dealerships are located south of the warehouse. NC 147 runs to their south. To the west is a parking deck and a modern multi-story courts building and jail.

##### 4.2.11.1 Determination of Effect, Venable Tobacco Company Warehouse (DH 97)

The Previous Design would have no adverse effect on the resource. The Proposed Refinement would add a center platform station near the DPAC located between Blackwell Street and Mangum Street. In order to accommodate the proposed new station, Pettigrew Street would be shifted southward approximately 10 feet toward DPAC (Figure 5-34). A proposed wider sidewalk would widen the existing sidewalk in proximity to the Venable Tobacco Company Warehouse. The anticipated effects relating to the Proposed Refinement would not be significantly different to the effects previously disclosed in the AOE report (Brown 2015). The proposed sidewalk changes would not impact the bridge wing walls during construction, resulting in no change to the previous commitment to preserve the wing walls. The Proposed Refinements would have **No Adverse Effect** on the Venable Tobacco Company Warehouse.



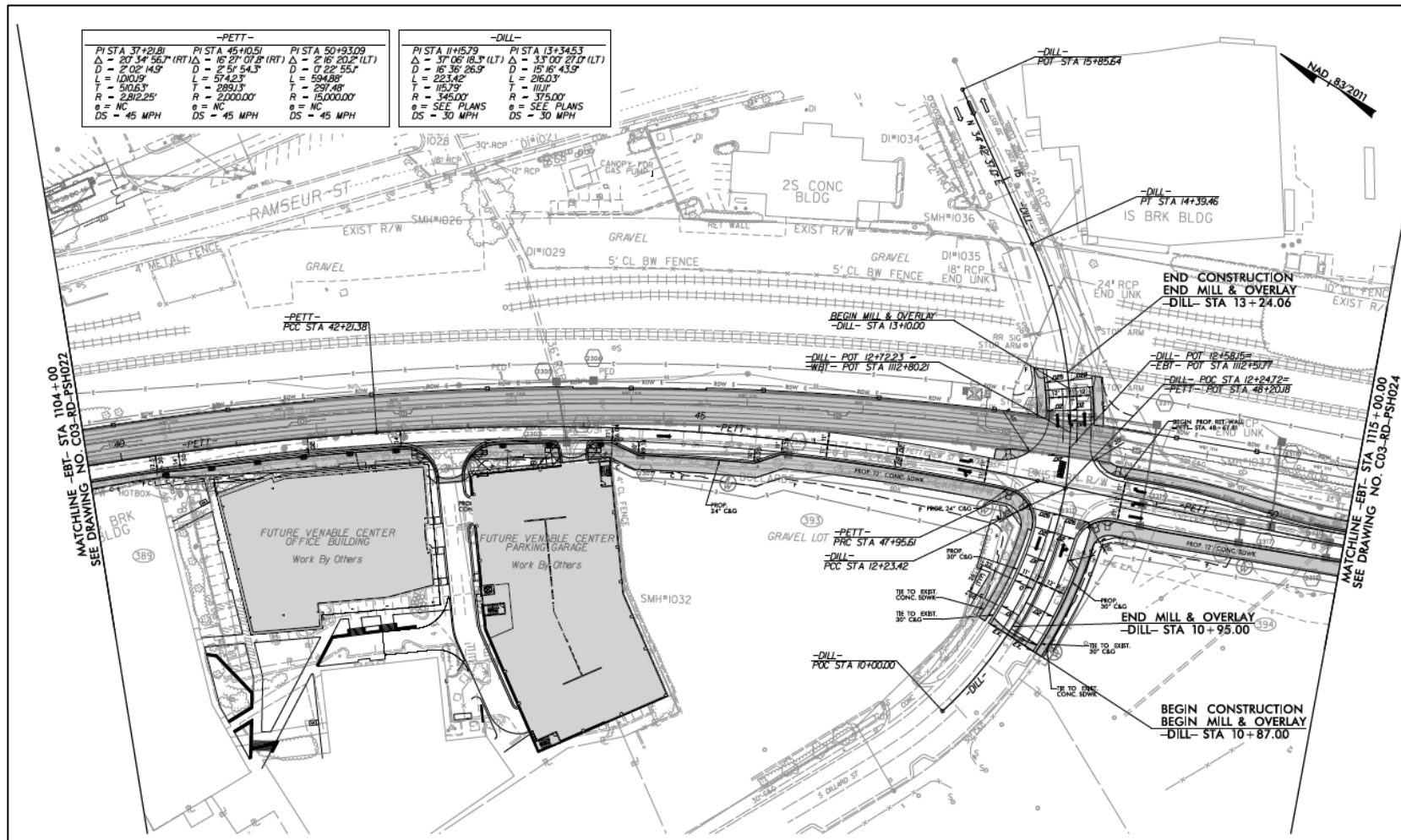


Figure 4-34. Proposed project plans in area of the Venable Company Tobacco Warehouse

#### 4.2.12 Durham Water Tower and Valve House (DH 3508)



**Figure 4-35. Durham Water Tower and Valve House (DH 3508)**

The Durham Water Tower and Valve House is located at 1318 East Pettigrew Street in Durham (Figure 5-35). The FTA previously determined that the resource is eligible for National Register listing under Criterion A for its association with the local activities of the Federal Emergency Administration of Public Works (FEAPW) and Criterion C as an excellent and unusually large example of a 1930s-era water tower. The FTA further previously determined that the tower is not National Register eligible under Criteria B or D. The history property's period of significance is 1939, the year the FEAPW built both the water tower and valve house.

The National Register-eligible boundaries of the Durham Water Tower and Valve House are the western third of parcel 119085. These boundaries, within which the tower and house stand, encompass approximately 0.4 acre of the 1.2-acre parcel. The boundaries are drawn to include acreage historically associated with the resource, which is fenced off and maintained within the larger parcel and retains its integrity. They exclude the eastern two-thirds of the parcel, which has been heavily disturbed and is used by Durham to store gravel and other materials. The northern edge of the resource's boundaries front on East Pettigrew Street and, just opposite, the 1854 NCR alignment. NC 147 and an interchange pass to the south. On the west is a bus maintenance facility; on the east are vacant lots and scattered housing.

##### 4.2.12.1 Determination of Effect, Durham Water Tower and Valve House (DH 3508)

The Previous Design included a proposed 60-foot tall parking deck, which resulted in no adverse effect to the historic resource. In the Proposed Refinements, the parking deck has been eliminated, so there will now be **No Effect** to the Durham Water Tower and Valve House (Figure 5-36).

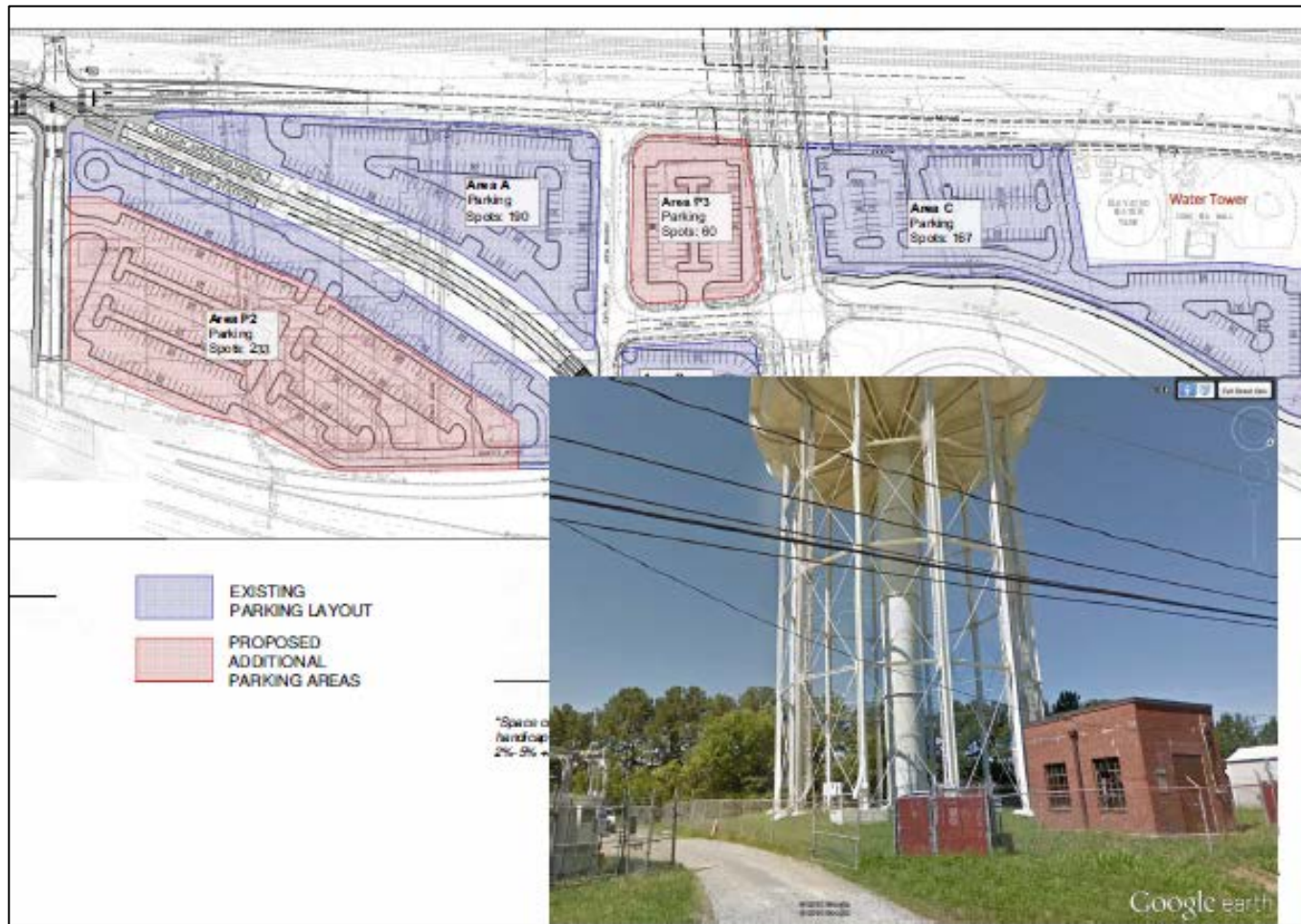


Figure 4-36. Proposed project plans in area of Durham Water Tower and Valve House



#### 4.2.13 Russell Memorial CME Church (DH 3663)



**Figure 4-37. Russell Memorial CME Church (DH 3663)**

The Russell Memorial CME Church is located at 703 South Alston Avenue in Durham (Figure 5-37). The church was built around 1952 and is located on the eastern side of Alston Avenue. Russell Memorial CME Church is eligible for National Register listing under Criterion C as a significant and largely intact example of an African-American, Romanesque Revival-style church in Durham. The NRHP-eligible boundaries of Russell Memorial CME Church are those of its two lots. They include the church and the former parsonage, which is recommended as a contributing building. The boundaries of these lots, as currently shown on tax maps, extend on the west to a retaining wall and steps in front of the church, but not to the sidewalk and South Alston Avenue and its right-of-way. On the east they also extend to a retaining wall and not beyond to the sidewalk or to Ridgeway Avenue and its right-of-way.

##### 4.2.13.1 Determination of Effect, Russell Memorial CME Church (DH 3663)

It was previously determined that the existing project would not alter any of the characteristics of the church that made it NRHP-eligible and would not take place within the NRHP-eligible boundaries of the church property. The Previous Design would have no adverse effect on the historic resource. The Proposed Refinements will involve filling the grassed gap between the sidewalk and the back of the curblin with sailor brick pavers in order to widen the sidewalk without affecting the retaining wall in front of the church (Figure 5-38). This is in accordance with the prior provision for automobile, bicycle, and pedestrian traffic in front of the church. Per the Amended ROD, this transportation focus in front of the church is consistent with the historic transportation uses provided there in the past. The project refinements would make transportation improvements in front of the church, but the construction limits of the proposed improvements would not extend into the NRHP-eligible boundary of the church property. For this reason, the project would continue to have **No Adverse Effect** on the Russell Memorial CME Church.

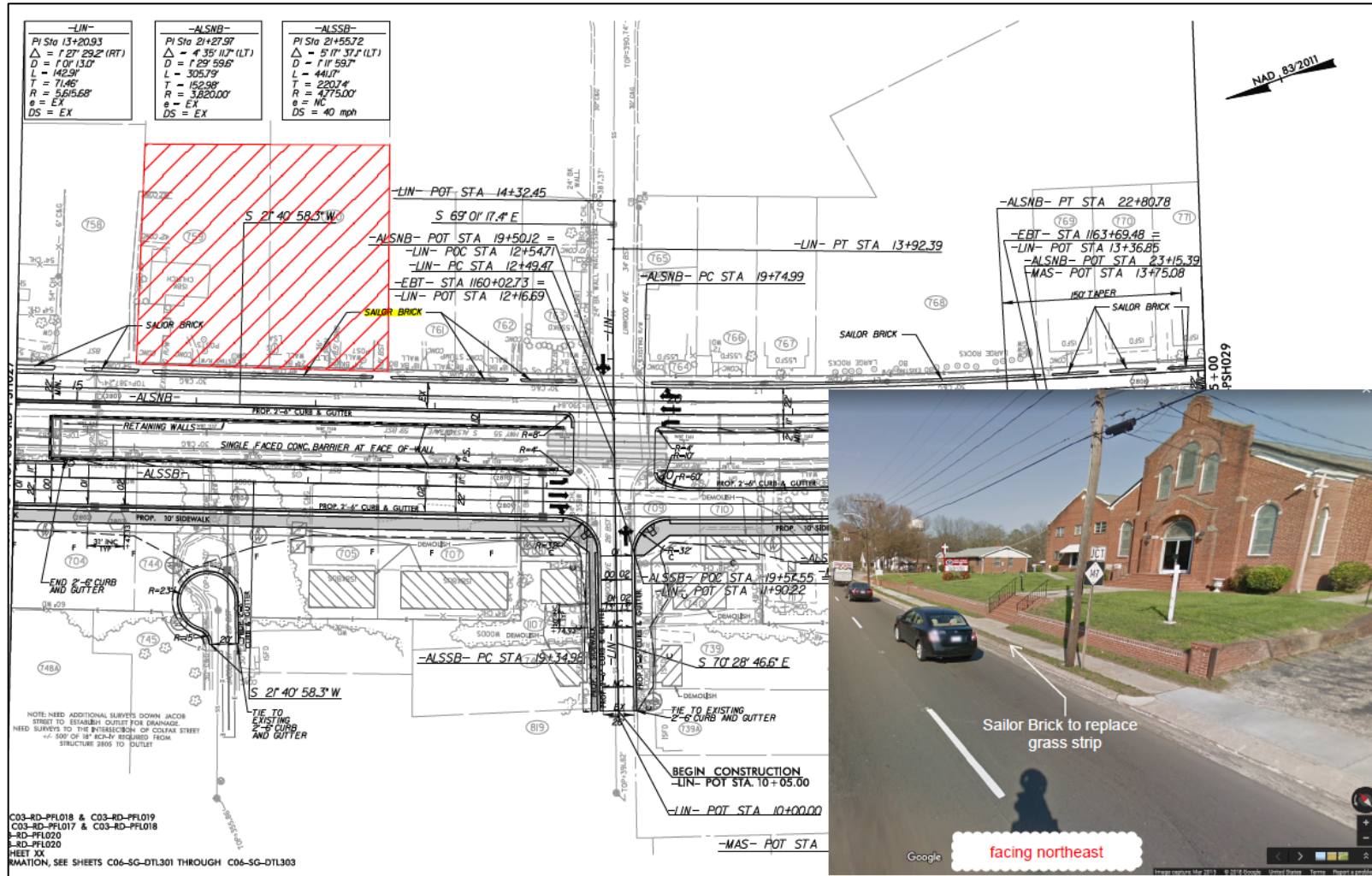


Figure 4-38. Proposed project plans in area of Russell Memorial CME Church (DH 3663)

## 5. References Cited

Brown, Marvin A.

- 2015 *Section 106 Preliminary Assessment of Effects for Historic Properties for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina*. NEPA/Section 106. Report available from Go Triangle, Durham, North Carolina, August.

Turco, Ellen

- 2018 *Historic Architectural Survey Report for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina*. NEPA/Section 106. Report available from Go Triangle, Durham, North Carolina, March.

Turco, Ellen and Scott Morris

- Supplemental Historic Architectural Survey Report for the Durham-Orange Light Rail Project, Durham and Orange Counties, North Carolina*. NEPA/Section 106. Report available from Go Triangle, Durham, North Carolina, June.





## Attachment F3a: Resumes

**MARY BETH REED**  
**PRESIDENT/DIRECTOR OF HISTORY**  
mbreed@newsouthassoc.com

## **EDUCATION**

M.A., American Civilization, University of Pennsylvania, 1983  
B.A., Anthropology, University of Arizona, 1976

**YEARS EXPERIENCE:** 27 years **with New South Associates:** 24 years

## **SUMMARY OF EXPERIENCE**

Mary Beth Reed serves New South as Principal Investigator for History and has more than 27 years professional experience in the Southeast, Southwest, and Mid-Atlantic. Ms. Reed has directed research in Arkansas, Alabama, Florida, Louisiana, South Carolina, North Carolina, Georgia, Illinois, Utah, New Jersey, Pennsylvania, Tennessee, Virginia, Maryland, and Washington, D.C. She has worked for various private and governmental clients, including the United States Army Corps of Engineers (USACE) Mobile, Wilmington, Savannah, and Fort Worth districts; the National Park Service; the USDA Forest Service; Departments of Transportation; utilities; and various state agencies. Ms. Reed has considerable federal experience throughout the southeastern U.S. and in the Republic of Panama. She has directed work for several USACE projects, has served as Principal Investigator for the Savannah River Site History Project for the Department of Energy, and continues to work with Cold War preservation planning for the Savannah River Site. Ms. Reed and two others were recently awarded the 2011 M.C. Robinson Prize for Historical Analysis from the National Council on Public History for her work on “The Ranch House in Georgia: Guidelines for Evaluation”. She was also named one of the Outstanding Women in Historic Preservation In Georgia by the Secretary of State in 2002. Ms. Reed’s areas of specialization include management of historic preservation projects; land use history; local history/community studies; architectural, agricultural, and industrial history; urban architecture/history; Cold War history; history of technology; history of granite quarrying; and National Register nominations and survey.

## **SUPERVISORY EXPERIENCE**

- 2016 Principal Investigator.** Cultural Resources Visual Site Assessment for Changes to Lodging Development Management Plan (LDMP) on Privatization of Army Lodging (PAL) Parcel A Aberdeen Proving Ground, Aberdeen, Harford County, Maryland. Directed the historic architecture survey for the Swan Creek Inn Project. Work was conducted for Tetra Tech and the U.S. Department of Defense.
- 2016 Project Manager.** Mountain Valley Pipeline Cultural Resources Survey, Virginia. Supervised reconnaissance architectural resource survey of a 98-mile long pipeline corridor. Survey was in excess of 5,000 acres and located 249 resources outlined in 8 separate survey and effects reports. Work began in 2014 and is ongoing. Work was conducted for Tetra Tech and the Federal Energy Regulatory Commission.
- 2016 Principal Investigator.** Charleston County Historic Resources Survey Update. Supervised the update of the 1992 Charleston County survey which included the survey of 1,319 properties as well as conducting three public meetings and a public workshop. Work conducted for Charleston County Zoning and Planning Department.

## **SUMMARY OF PUBLICATIONS AND PRESENTATIONS**

Author or co-author of one-hundred thirty-one (131) cultural resource management reports, one (1) cultural resource management plan, five (5) historic preservation plans, three (3) histories/popular histories, fifteen (15) historic properties/historic architecture documentations, four (4) research designs, (1) professional publication, and six (6) presented papers and symposia.

**ELLEN TURCO**  
**SENIOR HISTORIAN/ARCHITECTURAL HISTORIAN**  
**NEW SOUTH ASSOCIATES, INC.**

408-B Blandwood Avenue  
Greensboro, NC 27401  
eturco@newsouthassoc.com

**EDUCATION**

M.A., Public History, North Carolina State University, 1995  
B.A., Philosophy, Eckerd College, 1992

**YEARS EXPERIENCE:** 20 years **with New South Associates:** 5 years

**SUMMARY OF EXPERIENCE**

Ellen Turco has 20 years of experience conducting architectural and cultural resource surveys in North Carolina, South Carolina and Virginia. Ms. Turco has most worked on projects for the Virginia Department of Transportation, the North Carolina State Historic Preservation Office and local governments. She meets the National Park Service's Professional Qualifications Standards as an Architectural Historian.

- Historic and architectural resource survey
- National Register nominations
- National Register evaluations
- Section 106 compliance

**KEY EXPERIENCE**

**2013 Author and Architectural Historian.** *Intensive-Level Historic Architectural Analysis of Myatt's Mill Complex for the Replacement of Bridge 277 on SR 1006 (Old Stage Road) over Black Creek.* NRHP evaluation of twentieth-century recreational site that included a store, former grist mill, rental housing units, and landscape features such as a pond and dam, and circulation patterns. Identified historical trend and developed local context for millponds converted from agricultural production to recreational uses.

**2011 Architectural Historian.** *Historic American Engineering Record (HAER) Documentation of C.M. Thomas Coal Trestle.* Supervised production of large-format photography and measured as-built drawings, developed history and context for industrial coal trestles. Completed in fulfillment of Memorandum of Agreement between NC SHPO and the Federal Highways Administration.

**REPRESENTATIVE TECHNICAL REPORTS**

- 2013 Lowry, Sarah, Shawn Patch, Lauren Souther, and Ellen Turco. *Geophysical And Archaeological Survey of the Proposed Currituck Ferry Landing Improvements, Currituck County, North Carolina.* Report submitted to North Carolina Department of Transportation.
- 2013 Turco, Ellen. *Historic Context for Stronarch's Alley City Block, Raleigh, North Carolina.* Work performed for Raleigh Historic Development Commission, Inc.



**JACKIE H. TYSON**  
**HISTORIAN/ARCHITECTURAL HISTORIAN**  
jtyson@newsouthassoc.com

## **EDUCATION**

M.H.P., Historic Preservation, University of Kentucky – 2006  
B.A., Anthropology, Georgia State University – 2001

**YEARS EXPERIENCE:** 14 years **with New South Associates:** 8 years

## **SUMMARY OF EXPERIENCE**

Jackie Tyson has considerable experience in conducting historic research, historic architectural surveys and evaluations, National Register of Historic Places (NRHP) eligibility determinations, and produces technical reports. Ms. Tyson has conducted professional projects and research for the Georgia State Historic Preservation Office (SHPO) and is familiar with the compliance review procedures and personnel in the State of Georgia. She has experience working in Georgia, Florida, South Carolina, North Carolina, Kentucky, West Virginia, Mississippi, Alabama, Washington, and Pennsylvania. Ms. Tyson is well versed in the historic architecture of Georgia and in architectural survey and evaluation. Ms. Tyson's areas of expertise include:

- Architectural history survey
- Section 106 compliance
- NEPA compliance for cultural resources
- Historic research and context development
- Public history/interpretive materials

## **KEY PROJECT EXPERIENCE**

- 2017**      **Historian.** Fort Jackson History. One of two historians that prepared a history of Fort Jackson, South Carolina in celebration of the fort's 100th anniversary. Conducted historic research, helped to define the fort's periods of significance, and collaborated to write the report. She also contributed to illustrated popular report. The study was conducted for Mission & Installation Contracting CMD.
- 2015**      **Historian.** Georgia Department of Natural Resources Historic Context. Created a booklet/brochure that narrates the history of Georgia's Department of Natural Resources. Work conducted for the Department of Natural Resources.
- 2014**      **Project Manager.** Army Material Command, Various Integrated Cultural Resource Management Plans (ICRMP).
- 2011**      **Historian.** Integrated Cultural Resource Plan (ICRMP) Update for Red River Army Depot, Texas. Served as preservationist and author on an update to the ICRMP including the cultural resources, management requirements, and procedures at the Red River Army Depot, located in Bowie County, Texas.
- 2010-2011**      **Historian.** Natchez World War I Veterans Plaques Project. Completed in-depth research to update WWI veterans memorial plaques for the U.S. Courthouse in Natchez, MS. On-going project includes producing an exhibit for the courthouse interpreting the original 1924 plaques, which omitted African American veterans.

**JENNIFER LANGDALE**  
**HISTORIAN/ARCHITECTURAL HISTORIAN**  
**NEW SOUTH ASSOCIATES, INC.**  
jlangdale@newsouthassoc.com

## **EDUCATION**

M.A., Southern Studies, University of Mississippi, Oxford, Mississippi - 1995  
B.A., Historic Preservation, Mary Washington College, Fredericksburg, Virginia - 1991

**YEARS OF EXPERIENCE:** 27 years **with New South Associates:** 8 years

## **SUMMARY OF EXPERIENCE**

Jennifer Langdale has considerable experience in conducting historic research, historic architectural surveys and evaluations, National Register of Historic Places (NRHP) eligibility determinations, and producing technical reports. She also has experience preparing grant applications and organizing conferences. Ms. Langdale has conducted fieldwork/research and coordinated, authored, and/or edited projects for a number of clients including the National Park Service, the U.S. Army Corps of Engineers, various state departments of transportation, city and county governments, and private clients. She has worked in Georgia, North Carolina, South Carolina, Alabama, Mississippi, and Virginia. Ms. Langdale's areas of expertise include:

- Architectural history survey
- Section 106 compliance
- Historic research and context development

## **SELECT TECHNICAL REPORTS**

- 2018 Langdale, Jennifer. *Wake County Architectural Survey Update, Phase IV, Zebulon Corporate Limits and Extraterritorial Jurisdiction, Wake County, North Carolina*. Report submitted to North Carolina SHPO.
- 2002 Langdale, Jennifer and Mark T. Swanson. *Boll Weevils, Peanuts, and Air Power: An Architectural and Historical Survey of the City of Enterprise, Coffee County, Alabama*. Report submitted to the City of Enterprise.
- 2002 Adams, Natalie P., Jennifer Langdale, J.W. Joseph, and Sean Norris. *Lone Star to Rimini: An Intensive Archaeological Survey of a Proposed Causeway, Calhoun, Clarendon, and Sumter Counties, South Carolina*. Report submitted to HNTB.
- 2002 Littman, Sherri Baker, Jennifer Langdale, and Steve Koski. *Cultural Resources Survey at Johns Island, Palm Beach, Florida*. Report submitted to the U.S. Army Corps of Engineers, Jacksonville District.
- 2002 Steve Koski, Jennifer Langdale, and Sherri Baker Littman. *Phase I Cultural Resources Survey of the IR-2 Dredged Material Management Area, Indian River County, Florida*. Report submitted to the U.S. Army Corps of Engineers, Jacksonville District.



## Josh Fletcher, RPA

Cultural Resources Specialist

Josh Fletcher has more than 15 years of experience in contributions to NEPA documents and project management. Before joining HDR, Josh was a senior project manager for Brockington and Associates for 20 years and has worked with HDR on a large number of transportation and energy projects. His experience includes community outreach, extensive cultural resources management, consultation, and mitigation efforts, and coordination with SHPO offices.

### EDUCATION

MA, Archaeology, University of South Carolina, 1999

BS, Architectural Design, Clemson University, 1993

### REGISTRATIONS

Register of Professional Archaeologists, United States

### OFFICE LOCATION

North Charleston, SC

### INDUSTRY TENURE

20 years

### HDR TENURE

<1 year

### PAPERS

2010. *This Grand House--R. T. Wilson, Jr.'s Palmetto Bluff*. Paper presented at Forty-Third Annual Meeting of the Society for Historical Archaeology Conference, Amelia Island, Florida.

### PROFESSIONAL MEMBERSHIPS

Council of South Carolina Professional Archaeologists

Register of Professional Archaeologists

### RELEVANT EXPERIENCE

#### **SC 41 Improvements, Charleston and Berkeley Counties, SC**

Charleston County, the Town of Mount Pleasant and SCDOT are partnering to improve capacity and ease traffic congestion within the SC 41 corridor. The project study area extends from Clements Ferry Road in Berkeley County to US 17 in Charleston County. Proposed improvements may include improvements to SC 41 and/or other existing roadways within the corridor. Alternatives that include segments of new location roadways are also being considered. The NEPA process is underway and preliminary alternatives are being developed based on collected data.

**Role:** Community Characterization Report Lead and QA/QC for Cultural Resources Technical Reports

#### **Berlin G. Myers Parkway, Phase III, Summerville, SC**

This project is a new location, limited access roadway that runs parallel to the existing Sawmill Branch. Sawmill Branch was channelized more than forty years ago as part of a federal flood control project. Josh led the writing for the Environmental Justice document for the EA and was a QA/QC reviewer for the cultural resource sections.

**Role:** Lead Writer and QA/QC

#### **Carolina Crossroads (I-26/I-20/I-126) Environmental and Engineering Services, Columbia, SC**

HDR is providing engineering and environmental services for the preparation of an EIS, right of way plans and final construction plans for improvements to the I-20/26/126 corridor in Richland and Lexington Counties. Relevant services include notice of intent, project scoping (surveying and mapping, public involvement, purpose and need, traffic studies and analysis, and alternatives analysis), preparation of draft and final EIS, technical memorandums, assistance with record of decision and administrative record.

**Role:** NEPA Writer and QA/QC Reviewer for Cultural Resources Technical Documents and EIS Chapter

#### **Silicon Ranch Corporation (SRC) and Tennessee Valley Authority (TVA), Jonesborough Solar Tract, Washington County, TN**



As a subconsultant to HDR, Josh managed the cultural resources survey for a potential solar farm in Jonesborough. The cultural resources team used new GIS modeling technology to determine if the proposed solar farm would have a visual effect on nearby historic architectural resources identified and assessed during the cultural resources survey.

**Role:** Cultural Resources Project Manager

**UC Synergetic, Summerville-Pepperhill 230 kV Transmission Line, Berkeley and Charleston Counties, SC**

Josh managed the cultural resources survey for UC Synergetic and SCE&G. The transmission line corridor stretched for 7.5 miles and passed through several previously recorded archaeological sites and historic districts. Josh consulted with the SC State Historic Preservation Office (SC SHPO) and the clients to minimize effects to these historic resources.

**Role:** Cultural Resources Project Manager

**Charleston County, Palmetto Commerce Parkway Extension Phase II Project, Charleston County, SC**

Phase II extended four lanes of all new roadway beginning where Phase I ended and continuing to Ashley Phosphate Road at North Spartan Road. The project included an additional 3.9 miles of roadway, landscaped median, divided four-lane roadway, multi-use path and traffic signals. Josh managed the cultural resources survey and consulted extensively with the client and the SC SHPO, since it was determined that the project would have an adverse effect on NRHP-eligible 18<sup>th</sup> century inland rice fields identified during the cultural resources survey. The mitigation package included a number of products and outreach materials to educate the public about the rich and important history of the project area.

**Role:** Cultural Resources Project Manager

**Charleston County, Palmetto Commerce Parkway Phase III Project, Charleston County, SC**

Charleston County proposed to develop the Palmetto Commerce Parkway Phase 3 Project in North Charleston in order to develop a connection from Ladson Road to Aviation Avenue. Josh managed the cultural resources survey and consulted with the USAF and local historical groups.

**Role:** Cultural Resources Project Manager

**US 21 Harbor River Bridge Replacement Design-Build Preparation Services, Beaufort County, SC**

This historic US 21 bridge, built in 1939, connects St. Helena Island with Harbor Island. The main crossing is over the Harbor River. The project lies in the Salkehatchie Coastal Frontage Basin watershed which is comprised of a collection of sea islands and Hunting Island State Park. Josh managed the cultural resources survey, consulted with the Gullah Geechee Heritage Corridor organization, and aided in completing the Section 4(f) document.

**Role:** Cultural Resources Project Manager

**Charleston County, Maybank Highway Improvements Project, Johns Island, SC**

Charleston County's proposed improvements along Maybank Highway from River Road extends approximately one mile east and ends at the Paul J. Gelegotis Bridge over the Stono River. Josh managed the cultural resources survey and consulted with the SC SHPO on possible effects that the project may have on the surrounding Fenwick Historic District.

**Role:** Cultural Resources Project Manager

**Charleston County, I-526 Improvements Project, North Charleston, SC**

This eight-mile segment of Interstate I-526 was identified by the SCDOT for evaluation of future improvements to reduce congestion. To identify the many strategies available for congestion relief and improved capacity of I-526, the project will be pursued in three phases of work. As a subconsultant, Josh managed the cultural resources survey for the SCDOT and consulted with cultural resources staff at the SCDOT and SC SHPO on possible project effects on an NRHP-eligible archaeological site identified during the survey.

**Role:** Cultural Resources Project Manager