

DIN 01615

Neighborhoods and Community Resources Technical Report

Durham-Orange Light Rail Transit Project



The NEPA Preferred Alternative for the D-O LRT Project would generally follow NC 54, I-40, US 15-501, and the North Carolina Railroad (NCRR) Corridor in downtown Durham and east Durham. The alignment would begin at UNC Hospitals, parallel Fordham Boulevard, proceed east on NC 54, travel north on I-40, parallel US 15-501 before it turns east toward the Duke University campus along Erwin Road, and then follow the NCRR Corridor parallel to NC 147 through downtown Durham, before reaching its eastern terminus near Alston Avenue. The alignment would consist of at-grade alignment, fill and cut sections, and elevated structures. In two sections of the alignment, Little Creek and New Hope Creek, multiple Light Rail Alternatives are evaluated in the DEIS.

This technical report contains information for all alternatives analyzed in the DEIS. However, pursuant to MAP 21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), a NEPA Preferred Alternative has been developed, which recommends C2A in the Little Creek section of the alignment, NHC 2 in the New Hope Creek section of the alignment, the Trent/Flowers Drive station, and the Farrington Road Rail Operations and Maintenance Facility.



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List of Acronyms and Abbreviations

Acronym/Abbreviation	Definition
FTA	Federal Transit Administration
DEIS	Draft Environmental Impact Statement
D-O	Durham-Orange
D-O LRT	Durham-Orange Light Rail Transit
DTCC	Durham Technical Community College
I-40	Interstate 40
LPA	Locally Preferred Alternative
LRT	light rail transit
NC	North Carolina
NCCU	North Carolina Central University
NCRR	North Carolina Railroad
NHC	New Hope Creek
ROMF	rail operations maintenance facility
TPSS	traction power substation
UNC	University of North Carolina
US	United States
USACE	United States Army Corps of Engineers
VA	Veteran Affairs



1. Introduction

Triangle Transit, in cooperation with the Federal Transit Administration (FTA), has prepared a Draft Environmental Impact Statement (DEIS) to evaluate a potential high-capacity transit improvement in the Triangle region, within the Durham-Orange (D-O) Corridor, between Chapel Hill and Durham. This technical appendix focuses on the potential effects of the alternatives to neighborhoods and community resources in the study area. The D-O Light Rail Transit (LRT) Corridor study area is distinguished by numerous established residential neighborhoods such as the University of North Carolina at Chapel Hill (UNC), Meadowmont, Downing Creek, and the proposed Leigh Village, Duke University, and east Alston, to name a few. This assessment of neighborhoods and community services includes an evaluation of the effects of the project alternatives on the cohesiveness of residential areas (the ability of residents to communicate and interact with each other in ways that lend to a sense of community) and the neighborhood setting in general. Items of importance to people such as mobility, access, community cohesion, and impacts to community resources are described.

1.1 Description of the Study Corridor

The D-O Corridor is located within the Triangle region. It extends roughly 17 miles from southwest Chapel Hill to east Durham, and includes several educational, medical, and other key activity centers, which generate a large number of trips each day. The land uses in the D-O Corridor are supported by a network of major highways including NC 54, I-40, US 15-501, Erwin Road, and NC 147. Additional detail regarding the study corridor is included in the *Durham-Orange Light Rail Transit Project DEIS*, chapters 1 and 2.

1.2 Alternatives Considered

- No-Build Alternative
- Light Rail Alternatives

In addition to the Light Rail Alternatives, the DEIS considers a No-Build Alternative comprised of the existing and programmed transportation network improvements without the planned rail improvements and associated bus network modifications. Additional detail regarding the alternatives considered is included in the *Durham-Orange Light Rail Transit Project DEIS*, chapter 2.

1.2.1 No-Build Alternative

The No-Build Alternative includes the existing and planned transportation programs and projects scheduled to be built and implemented before forecast year 2040 and contained in the 2040 MTP, excluding only the proposed Light Rail Alternatives, rail transit improvements and related bus transit modifications associated with the proposed D-O LRT Project.

1.2.2 Light Rail Alternatives

Through the Alternatives Analysis and Scoping process, a majority of the proposed D-O LRT Project alignment was identified. However, there are a few areas where different alternatives were retained for further evaluation. As a result, multiple alignments crossing Little Creek and New Hope Creek are evaluated in the *Durham-Orange Light Rail Transit Project DEIS*.



- Four potential crossings of Little Creek between Hamilton Road and the proposed Leigh Village Station (Alternatives C1, C1A, C2, and C2A)
- Three potential crossings of New Hope Creek and Sandy Creek between Patterson Place and South Square (Alternatives NHC LPA, NHC 1, and NHC 2)
- Station alternatives at Duke/VA Medical Centers (Duke Eye Center and Trent/Flowers Drive)
- Five proposed locations for the Rail Operations and Maintenance Facility (Leigh Village ROMF, Farrington Road ROMF, Patterson Place ROMF, Cornwallis Road ROMF, and Alston Avenue ROMF)

The Light Rail Alternatives would generally follow NC 54, I-40, US 15-501, and the North Carolina Railroad (NCRR) Corridor in downtown Durham and east Durham. The alignment would begin in Chapel Hill at UNC Hospitals, parallel Fordham Boulevard, proceed eastward adjacent to NC 54, travel north along I-40, parallel US 15-501 before it would turn east toward Duke University and run within Erwin Road, and then follow the NCRR Corridor that parallels the Durham Freeway (NC 147) through downtown Durham, before reaching its eastern terminus in Durham near Alston Avenue. The alignment would consist of at-grade alignment, fill and cut sections, and elevated structures. Seventeen stations are planned, and up to 5,100 parking spaces would be provided along the Light Rail Alternatives. In addition, a ROMF would be constructed to accommodate the D-O LRT fleet (initially 17 vehicles, with the ability to accommodate up to 26 vehicles without needing expansion).

Bus routes would be modified to feed into the D-O LRT stations, and headways would be adjusted to provide more frequent bus service and minimize transfer waiting times. These services would also connect light rail passengers with other area transportation hubs, including park-and-ride lots and transfer centers.



2. Legal and Regulatory Framework

No specific laws or executive orders regulate how impacts to community character, cohesion, and community facilities resulting from transit projects are evaluated. The National Environmental Policy Act (NEPA) (41 USC 4321) forms the general basis of consideration of these potential social impacts. In addition, the Council on Environmental Quality (CEQ) (40 CFR Part 1502) contains regulatory requirements for description of the affected environment and environmental consequences for general resources, including neighborhoods and community facilities. Local ordinances regulate parking, noise, building codes, litter, public safety, traffic, zoning, and general welfare.

3. Methodology

3.1 Overview

This report identifies potential impacts to existing neighborhoods and community resources. Descriptions of the existing conditions within study area neighborhoods are based on site visits, aerial photography, internet research, interviews with local planners, and applicable local planning documents. Data presented were compiled from a variety of sources, including field visits, internet research (including tax and parcel data, public records, and real estate information), direct communication with property managers and/or residents, and interviews with local planners. Neighborhoods are described qualitatively in terms of their general land use and housing characteristics.

Data on community resources were obtained in part from the North Carolina Center for Geographic Information Analysis, Orange and Durham Counties' geographic information system (GIS) departments, ADC Map books, and field reviews conducted in July and September 2013. In addition, information was confirmed during interviews with local planners who provided additional insight into their respective communities. Information on specific resources, including addresses and other descriptive information, was obtained from field visits and internet research. Specific sources are referenced and a comprehensive list of sources is included in appendix A.

Potential effects are discussed qualitatively in terms of the following types of impacts. The magnitude of impact was generally determined based on review of the preliminary design plans, relative level of perceived impacts, public input, professional judgment, and knowledge of the study area. How each criterion was assessed is described below:

- Access and Mobility – While the terms “access” and “mobility” are often used interchangeably when discussing a transportation project, they have distinct definitions and care should be taken to use the appropriate term for a given circumstance. These definitions apply to all modes of transportation, including non-vehicular transport.
 - **Access** is the ability to reach private property from a transportation network. Access effects were assessed by determining where the alternatives would result in changes to the existing pattern of vehicular or pedestrian/bicycle traffic, how they would restrict access at locations where access currently exists, or where new or enhanced access would be provided.
 - **Mobility** is the ability to move around a transportation network. Mobility effects were assessed through the change in transportation options, as well as changes in the efficiency of travel. These impacts are indicated by the expansion, addition, reduction, or removal of travel lanes, transit, or pedestrian facilities.
- Community Cohesion – Community cohesion reflects a variety of factors including the degree to which people have a sense of belonging to their neighborhood or community; are connected by social, work, or other relationships; share values or a common vision for their community; or share other bonds linking individuals to one another or to their community as a whole.

Community cohesion effects were assessed by determining potential disruption in the interaction among people and groups within a community, the use of community resources, residential stability, and length of time residents have resided in the community. These impacts may occur because of a physical barrier, change in land use, or other effects of a project.

- Community Resources – Community facility effects were assessed by determining whether there are property impacts or changes in access or parking that would affect community resources.
- Residential Property Displacements and Acquisitions – Residential displacements are the complete taking of property. Residential properties within the proposed right-of-way or affected by the proposed right-of-way (i.e., inaccessible, close proximity to improvements) were identified as displacements. A detailed assessment of displacements can be found in section 4.14 Acquisitions, Relocations, and Displacements of the *Durham-Orange Light Rail DEIS (2015)*.
- Visual Quality – Visual quality and aesthetic effects were assessed by determining where alternatives would result in the addition of new elements or the removal of existing features from the visual environment and where the alternatives would change the visual character of the community. More detailed discussion of visual quality and aesthetic effects can be found in the *Aesthetics and Visual Resources Technical Report (2015)*.
- Noise – Noise effects were assessed by determining where increases in noise generated by the alternatives and stations would exceed FTA noise abatement criteria. These criteria and noise effects of the project are discussed in more detail in the *Noise and Vibration Technical Report (2015)*.

3.2 Study Area

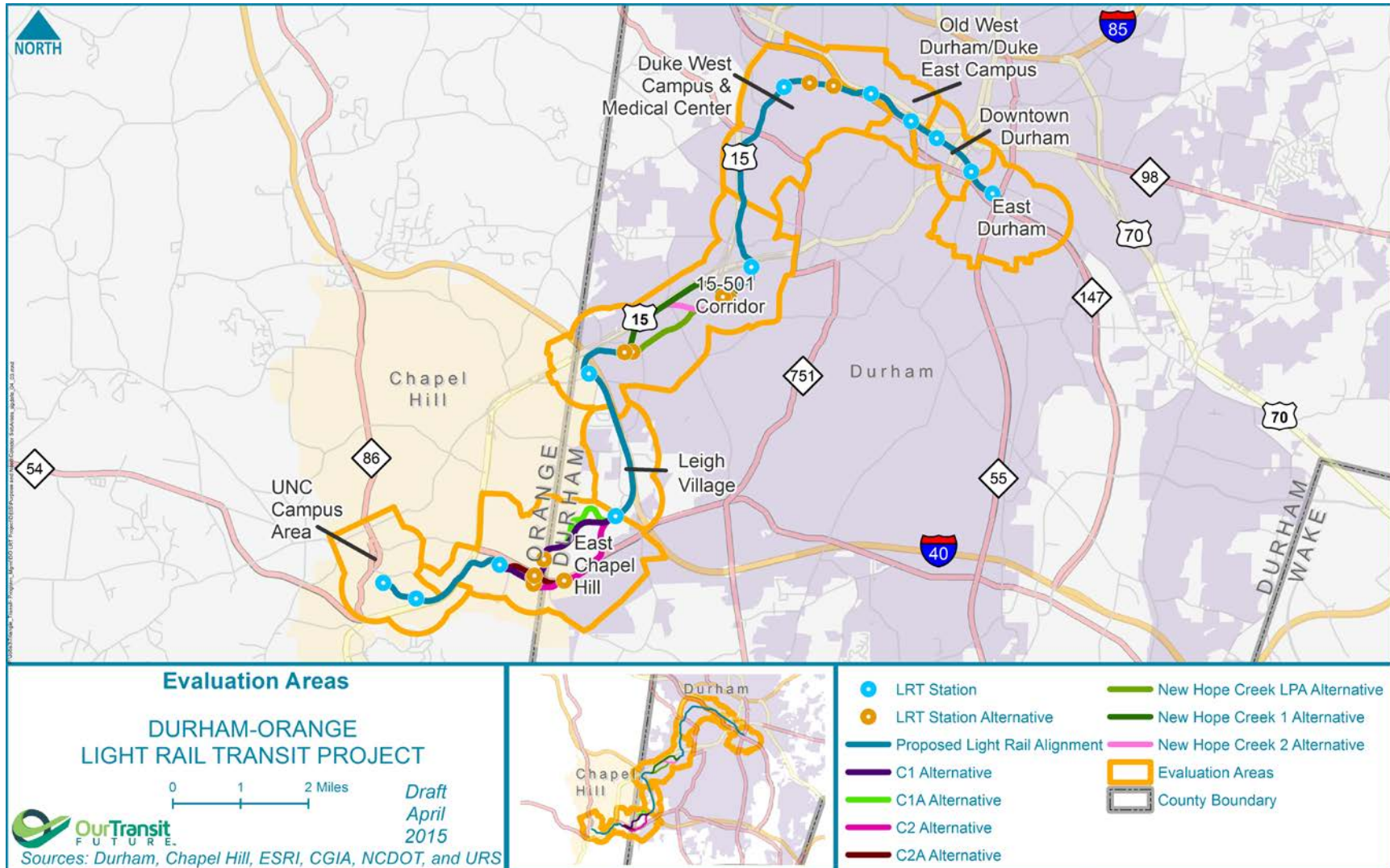
The study area for evaluating neighborhoods and community resources generally includes the land area within ¼-mile (1,320 feet) on either side of the proposed alignment(s) and ½-mile radius from proposed stations, as this represents the area where project benefits are likely to be greatest as well as the average distance that a person is willing to walk to access a station. It also includes university and neighborhood boundaries identified by local stakeholders. Also included in the analysis are several resources where only a portion of the area falls within the distance-based buffer, and other resources that are immediately adjacent to the study area and may be used by populations within the study area.

3.3 Evaluation Areas

Neighborhoods and potential impacts to neighborhoods are described using Evaluation Areas, shown in Figure 1. Evaluation Areas were developed by grouping the project corridor into areas using the following criteria:

- Similarities in land use and context
- Proximity to and likelihood of using a particular proposed station
- Transportation functionality/connectivity

Figure 1: Evaluation Areas





4. Affected Environment

4.1 Neighborhoods

The following sections contain detailed descriptions of the major neighborhoods, subdivisions, and housing complexes within each Neighborhood Evaluation Area. Where appropriate, specific sources are referenced; source numbers refer to the comprehensive list of sources included in appendix A.

4.1.1 UNC Campus Evaluation Area

The neighborhoods located in the UNC campus are shown in Figure 2. Historic districts are noted with a gray cross-hatch in Figure 2.

4.1.1.1 Cameron-McCauley

Located west of the UNC campus, the Cameron-McCauley Historic District is one of three historic districts in Chapel Hill. Cameron-McCauley is located within walking distance of the campus, as well as Franklin Street and downtown. The neighborhood was originally developed in the early 1850s and then expanded in the 1940s. The neighborhood is characterized by small lots with mature vegetation and houses in a variety of architectural styles, including Colonial Revival and Craftsman. The neighborhood contains a mix of students, educators, and business professionals from the Research Triangle Park.

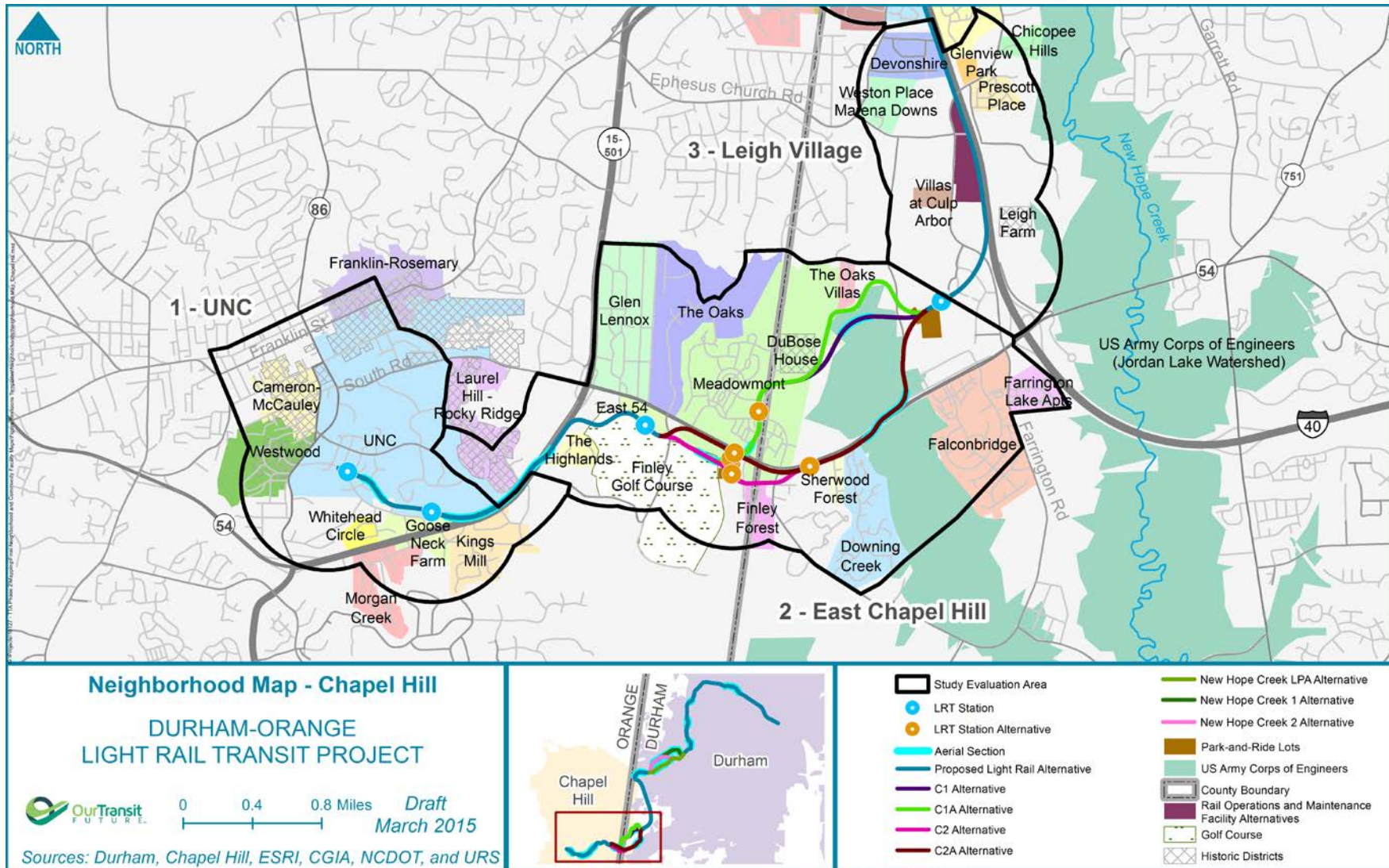
4.1.1.2 Westwood

Westwood is an older neighborhood located off South Columbia Street within walking distance to the UNC campus, particularly the UNC Hospitals area. The neighborhood has winding streets and wooded lots with a mix of Victorian, traditional, Cape Cod, and bungalow style homes built from the 1920s to the 1950s. Some newer homes have been constructed on previously vacant lots.

4.1.1.3 Franklin-Rosemary Historic District

The Franklin-Rosemary Historic District abuts the eastern edge of downtown Chapel Hill. East Franklin Street is the heart of the Franklin-Rosemary Historic District, which also extends several blocks on either side. Over the past decade, numerous older homes were renovated to restore their historic tradition. Houses are nineteenth century Federal, Greek revival, and gothic revival styles with bungalow style houses added in the early twentieth century. The district includes fraternity and sorority residences and a few institutional buildings associated with the UNC campus. This area also generally has the highest priced homes in the historic areas.

Figure 2: Chapel Hill Neighborhoods





4.1.1.4 UNC Campus

There are 32 residence halls on the campus of UNC, divided into 13 different residential communities. Forty-six percent of students live on campus, including all first-year students.

4.1.1.5 Kings Mill and Morgan Creek Neighborhood

The Kings Mill and Morgan Creek Neighborhoods are located in Chapel Hill, bordered by Fordham Boulevard (US 15-501 – NC 54) to the north, the North Carolina Botanical Garden to the east, and the conservation districts of Morgan Creek and Merritt’s Meadow to the west and south. The neighborhood is within walking distance of the UNC campus and UNC Hospitals. The neighborhood was built in the 1950s and 1960s. The houses were designed with consideration of the environment of the area. The neighborhood is now a Neighborhood Conservation District with a zoning overlay to protect its character, including preventing further subdivision of lots, maintaining a minimum lot size, and establishing a minimum setback.

4.1.1.6 Other Subdivisions

Other subdivisions in the UNC Campus evaluation area include:

- Whitehead Circle – Whitehead Circle is located on Whitehead Road off Mason Farm Road. It includes 22 parcels with single-family homes constructed in the 1950s.
- Goose Neck Farm – Goose Neck Farm is located between Mason Farm Road and Fordham Boulevard. It includes 33 single-family homes.

4.1.2 East Chapel Hill Evaluation Area

The East Chapel Hill Evaluation Area includes the NC 54 corridor serving Chapel Hill and spans the Orange-Durham county border. This area is characterized by a mixture of older, small lot, single-family, and multifamily neighborhoods and new, higher density, mixed-use development. Area residents are able to travel to the UNC campus by transit (about 5 minutes), bike (about 10 minutes), or walk (about 15-20 minutes), as the area contains sidewalks, multi-use paths, and frequent transit service. Main residential areas include the Laurel Hill-Rocky Ridge area, Glen Lennox, the Oaks, and Meadowmont Village. This area also includes Finley Golf Course and the North Carolina Botanical Gardens. Neighborhoods surrounding the Botanical Gardens are generally more compatible with the natural environment of the area, with larger, wooded lots and winding streets. The neighborhoods in this Evaluation Area are shown in Figure 2.

4.1.2.1 Laurel Hill-Rocky Ridge Farm

The Rocky Ridge Farm neighborhood centers on Laurel Hill Road as it travels from the UNC Law School to US 15-501. Homes were built from the 1920s to the 1950s and feature mature trees and other vegetation. The majority of the homes were designed by local and regional architects, many constructed in either the Colonial Revival style of the 1920s and 1930s or vernacular cottage styles. The neighborhood went through a second period of development following World War II that featured Colonial Revival, Colonial Ranch, and mid-century Modern styles.



4.1.2.2 Glen Lennox

Glen Lennox is an existing mixed-use development located off Raleigh Road and Fordham Boulevard. It includes 440 cottage style apartments on the northern side of NC 54. The town, in conjunction with the developer/owner and area residents, recently adopted a master plan for redevelopment in the next 10 years that includes 750 to 1,500 dwelling units, a 150-room hotel, and 350,000 to 750,000 square feet of commercial space.

East 54, a recently completed mixed-use, transit-oriented development, is located opposite Glen Lennox, south of NC 54. Built in 2008, the new urban village consists of luxury condominiums, shops, offices, and dining, as well as a hotel.

Glenwood Square Shopping Center is also located in this neighborhood on NC 54. It has 115,000 square feet of neighborhood commercial space, including a grocery store, two restaurants, and other small businesses.

4.1.2.3 The Oaks

The Oaks neighborhood is located on NC 54 east of UNC and downtown Chapel Hill surrounding the Chapel Hill Country Club, which spans the Chapel Hill/Durham border (part of this neighborhood is in Chapel Hill and part is in Durham). There is an older section of homes built in the 1970s and 1980s and a new section of homes built since the 1990s. These homes range in size, style, and type. The streets in this neighborhood are wide, and many have sidewalks. The Oaks also has a condominium/townhouse section with units constructed in the 1970s and 1980s.

4.1.2.4 Meadowmont

Meadowmont is a 1,300+ unit planned neo-traditional development located north of NC 54, approximately five minutes from the UNC campus and I-40. This neighborhood was developed with a mixture of office, ground floor retail, and upper level residential, as well as a variety of home styles, neighborhood parks, and sidewalks on both sides of the street. The neighborhood was also designed to support a fixed guideway transit station, which was envisioned in plans for the area. Housing ranges from detached single-family to traditional four to five story apartments. The neighborhood includes a grocery store, several neighborhood and specialty businesses, and a medical center. In addition, the Cedars is a continuing care retirement community within Meadowmont that includes an onsite health center with skilled nursing and assisted living.

Also located within Meadowmont are Rashkis Elementary School, Town Park, UNC Hospitals Wellness Center, and the Paul J. Rizzo Conference Center. Opposite Meadowmont, south of NC 54, is the William and Ida Friday Center for Continuing Education, which is owned by UNC and supports conference and meeting facilities.

4.1.2.5 Downing Creek and Falconbridge

Downing Creek and Falconbridge neighborhoods are located just east of the Orange County/Durham County border and south of NC 54 on either side of Little Creek. Houses in both subdivisions were constructed in the 1980s and 1990s. Lots in Falconbridge are slightly larger. Downing Creek also includes about 130 townhomes/condos.

4.1.2.6 Other Subdivisions

Other subdivisions in this area include:

- The Highlands – includes about 25 single-family homes off Old Mason Farm Road adjacent to Finley Golf Course.
- Finley Forest – neighborhood of condominiums and townhomes located between the Friday Center and Barbee Chapel Road.
- Sherwood Forest – a neighborhood of about 20 single-family homes on wooded lots off Stancell Drive (Old Hwy 54).
- The Oaks Villas – a neighborhood of approximately 30 single-family homes primarily built in the 1990s, located north of Meadowmont adjacent to the Jordan Lake watershed.
- Farrington Lake Apartments – an apartment complex built in 1990 located between NC 54 and I-40.

4.1.3 Leigh Village Evaluation Area

The Leigh Village Evaluation Area includes the area between I-40/NC 54 interchange and the Farrington Road crossing of I-40. This area is rural-suburban with dispersed single-family homes and a few small subdivisions.

4.1.3.1 Patterson’s Mill and Leigh Farm

The area along I-40 between NC 54 and Farrington Road has remained relatively rural due to the presence of Patterson’s Mill Country Store on the west side of I-40, a museum on the site of the original 1870s-era store, and Leigh Farm Park, an approximately 90-acre heritage park in the northeast quadrant of the I-40/NC 54 interchange. There are some dispersed single-family homes, and the Villas at Culp Arbor, an age-restricted (55+) community of condominiums, is located on Farrington Road opposite Patterson’s Mill.

4.1.3.2 George King Road/Ephesus Church Road/Pope Road

The area west of I-40 between George King Road and Farrington Road contains suburban neighborhoods primarily made up of small- to medium-sized single-family homes and apartment complexes. Most of the homes in the area were built between 1970 and 1999; however, there are some newer subdivisions near the intersection of George King Road and Ephesus Church Road. Neighborhoods in this area include:

- Marena Place – located near the intersection of Ephesus Church Road and Pope Road, including about 20 single-family homes.
- Weston Downs – a new subdivision of approximately 75 single-family homes located off Ephesus Church Road with future phases planned.
- Glenview Park – includes 44 newly constructed (mid-2000s) attached row/townhouses with garages located on the north side of Farrington Road just east of I-40.
- Prescott Place – subdivision of approximately 100 single-family homes constructed in the 2000s located on the south side of Farrington Road just east of I-40.

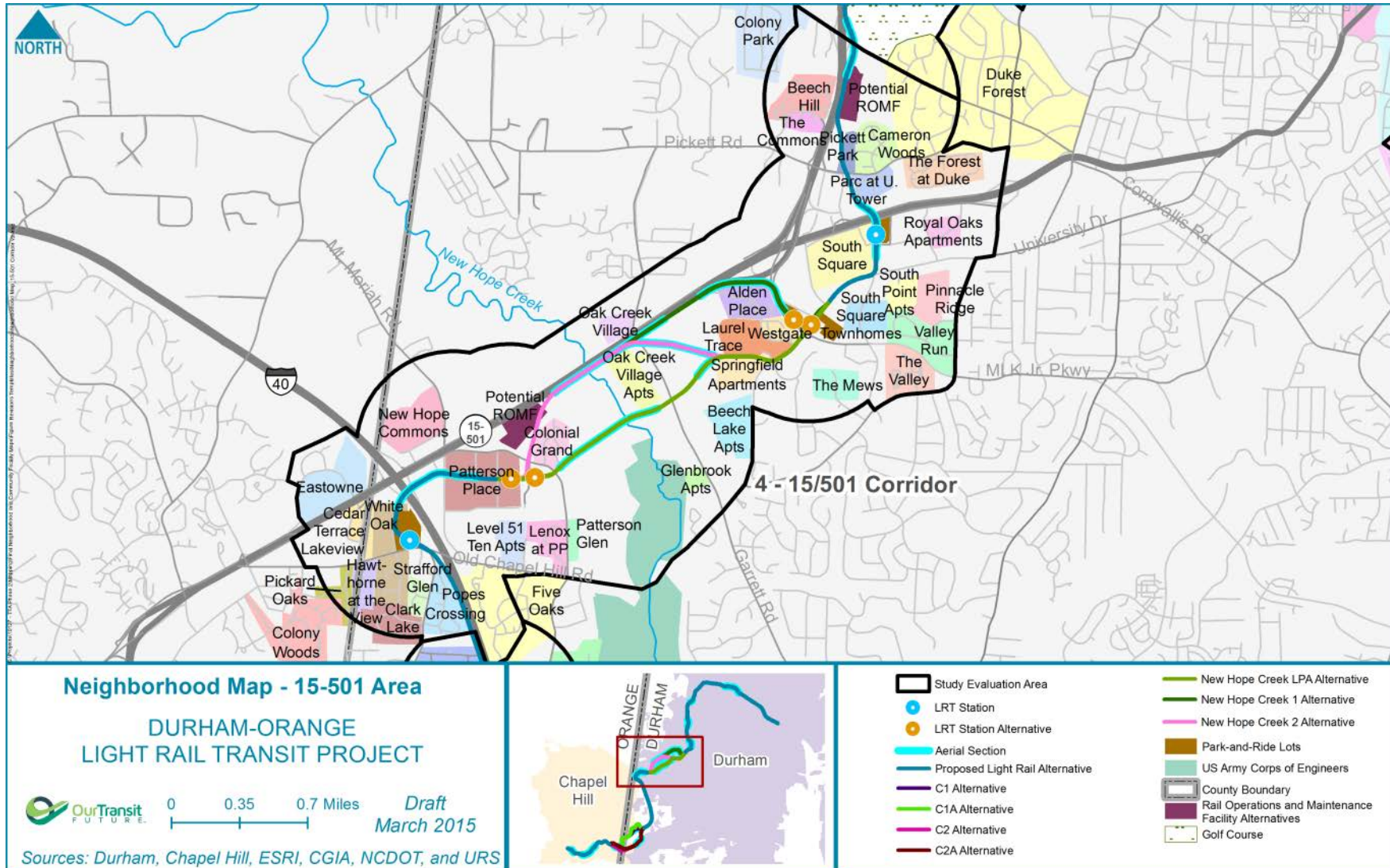


- Chicopee Hills – small subdivision of approximately 20 single-family homes built in the late 1960s and early 1970s located off Old Chapel Hill Road east of I-40.
- Devonshire – a subdivision of approximately 60 single-family homes built in the late 1960s and early 1970s.

4.1.4 US 15-501 Corridor Evaluation Area

The US 15-501 Corridor Evaluation Area includes the US 15-501/I-40 interchange and the US 15-501 corridor east to Cornwallis Road, including the New Hope Creek area and the South Square area. US 15-501 is a major transportation corridor connecting Durham and Chapel Hill. The immediate area is characterized by commercial and retail development and with residential areas ranging from large lot single-family homes to large apartment complexes. Neighborhoods in this evaluation area are shown in Figure 3.

Figure 3: US 15-501 Area Neighborhoods



4.1.4.1 I-40/US 15-501 Interchange Area

The area surrounding the I-40/US 15-501 interchange contains a number of commercial, retail, and institutional areas. The former North Carolina headquarters of Blue Cross Blue Shield is located just to the west of the interchange area, as is the Eastowne Office Park. The Five Oaks Office Park is located in the southeastern quadrant of the interchange. Just to the east along US 15-501 is a major new development known as Patterson Place. In Durham's Comprehensive Plan (adopted 2005 and amended in 2014) the Patterson Place area is identified as a Compact Neighborhood, designated to accommodate higher intensity and transit-oriented development typical of a suburban setting (see *Durham-Orange Light Rail Transit Project DEIS* (2015), chapter 4.1 for more information). Within the past few years, a five-story hotel and a four-story medical center services building have been built, and infrastructure and site planning reflect long-term plans for compact, mixed-use, walkable development.

Several residential subdivisions surround the I-40/US 15-501 interchange, including the following:

- Five Oaks – a small neighborhood of approximately 20 homes and 200 townhomes in southwest Durham; homes are typically contemporary and situated in a private wooded setting.
- Colony Woods – a subdivision of more than 150 homes, with sections built in the 1970s, 1980s, and 1990s located off Ephesus Church Road.
- White Oak – a small subdivision of eleven single-family homes located off Old Chapel Hill Road just west of Pope Road.
- Popes Crossing – a neighborhood of 69 cottage-style two- and three-bedroom homes located off Pope Road near Old Chapel Hill Road.
- Cedar Terrace Lakeview – a small community of 1950s era ranch homes along East and West Lakeview Drive.
- Stratford Glen – a neighborhood of 25 single-family homes off two cul-de-sac streets. Homes were built in the late 1980s and early 1990s.
- Clark Lake – a small neighborhood of approximately 15 single-family homes centered on Clark Lake Road and a small lake.
- Pickard Oaks – a neighborhood of 64 duplex townhomes.

Approximately one-half mile east of the interchange with I-40 and on the northwest corner of the intersection of US 15-501 and Mount Moriah Road is the New Hope Commons shopping center. This shopping area includes several big box retail stores, other retail businesses, and restaurants. Further east, the US 15-501 corridor crosses New Hope Creek and its associated conservation areas before transitioning to a stretch of auto-oriented development and two- to three-story apartment complexes.

4.1.4.2 University Drive/Martin Luther King Jr. Parkway

Near the intersection of University Drive and Martin Luther King Jr. Parkway is a busy commercial node including a combination of retail and office uses, including big box and other retail, auto-oriented businesses, and restaurants. A number of large apartment complexes (two to four stories in height surrounded by surface parking) are located west of University Drive. Other multifamily housing, including condominiums and townhouse communities, are also prevalent. Valley Run subdivision is



located near the intersection of Martin Luther King Jr. Parkway and Chapel Hill Road and includes small to mid-sized single-family houses, several apartment complexes, and townhome communities. Townhome communities include the following:

- Westgate Townhomes – a development of approximately 100 townhomes and condominiums.
- Pickett Park Townhomes – a new development with 51 townhomes located near US 15-501 and Tower Road.
- Patterson Glen – a small community of 30 craftsman-style townhomes.
- Valley Run – a neighborhood of single-family homes built in the 1980s.
- The Valley – a small neighborhood of 30 single-family homes built between the 1980s to the 2000s.

4.1.4.3 Pickett Road/West Cornwallis Road

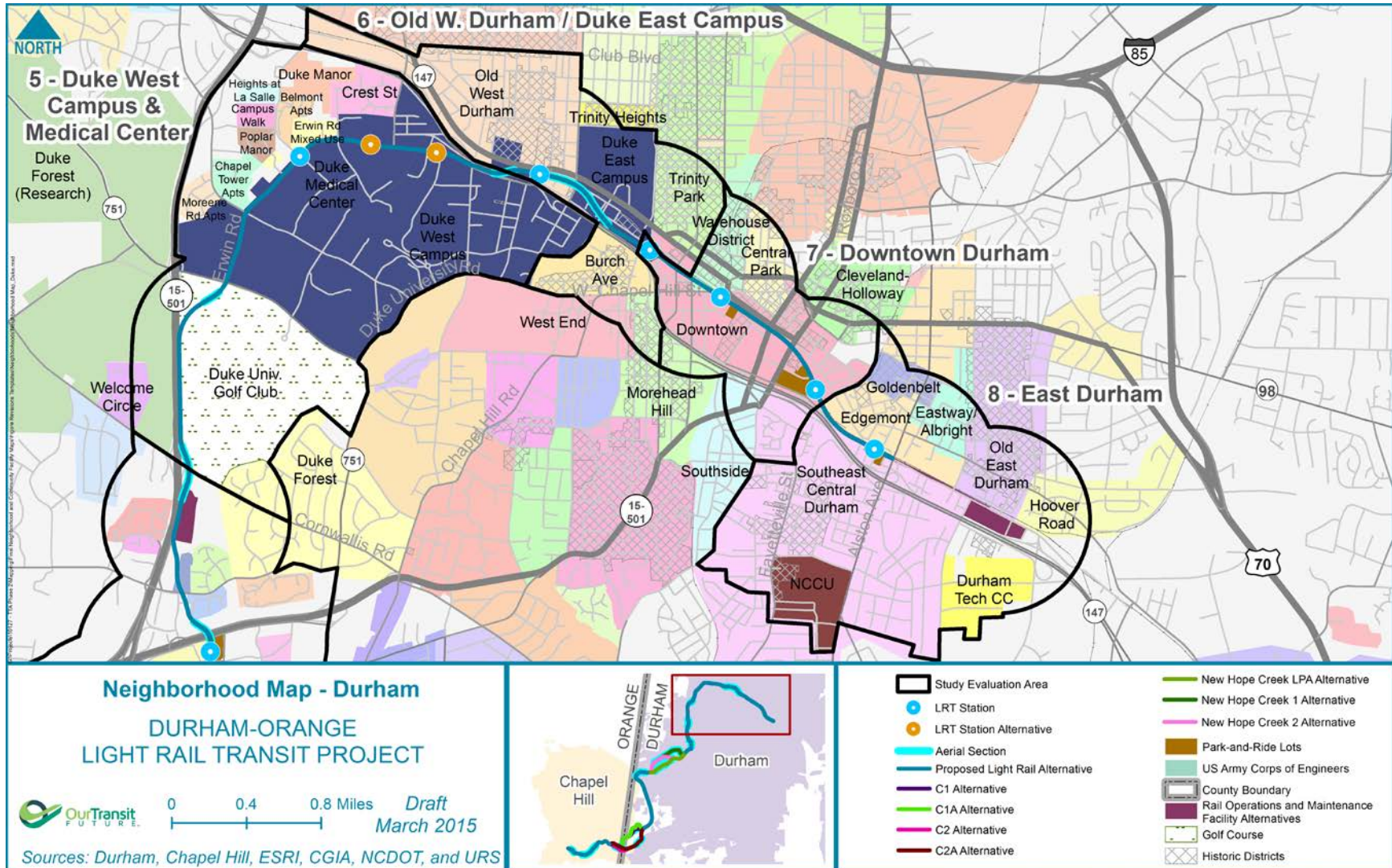
The area along Pickett Road and West Cornwallis Road includes medium-size (three or four bedroom) to large-size single-family homes and some apartment complexes, with a mixture of owners and renters. Many of the residences in this area are established, having been built between 1970 and 1999, with some newer homes. Subdivisions in this area include Beech Hill, Colony Park, The Commons, Cameron Woods, and Duke Forest.

- Beech Hill – is a small community with 24 townhouse units.
- Colony Park – includes approximately 125 homes constructed in the 1960s.
- The Commons – approximately 35 single-family homes located in cul-de-sacs off Colony Road.
- Cameron Woods – a neighborhood of roughly 70 single-family homes located off Pickett Road.
- The Forest at Duke – is a continuing care retirement community built in 1992. The community includes apartments, cottage homes and a health and wellness center.
- Duke Forest – is located less than 2 miles from Duke University and Duke Medical Center. It is a wooded neighborhood with a range of house types, sizes, and styles. Houses are a mix of traditional, modern, contemporary, and colonial styles. The majority of the lots are wooded and some will have the natural buffer of the original Duke Forest.

4.1.5 Duke West Campus and Medical Center Evaluation Area

The neighborhoods in the Duke West Campus and Medical Center Evaluation Area are shown in Figure 4. The Duke West Campus and Medical Center Evaluation Area extends from Cornwallis Road to Campus Drive, including the Washington Duke Golf Course, Duke University's West and Central Campuses and Medical Center complex, as well as the area encompassed by Erwin Road to the south, US 15-501 to the west, and NC 147 (Durham Freeway) to the north.

Figure 4: Durham Neighborhoods





Two of the region's largest employers are located in this area – Duke University Medical Center and the Durham Veterans Affairs (VA) Medical Center. Most of the property in this area south of Erwin Road is owned by Duke University and is intensely developed as part of the campus or the Medical Center. In Durham's Comprehensive Plan, the Medical Center area is identified as a Compact Neighborhood, Durham's equivalent of a transit-oriented district.

4.1.5.1 Duke University West Campus and Central Campus

Duke's West Campus is populated by second, third and fourth year undergraduate students in dormitories organized into seven residential quads. Central Campus provides housing for more than 1,000 students in 45 apartment buildings. These apartments include studio, one-bedroom, two-bedroom, and three-bedroom units.

4.1.5.2 Morreene Road/La Salle Street

Erwin Road, a busy multi-lane urban arterial, separates Duke University to the south from the Morreene Road and LaSalle Street neighborhoods to the north. While there is some new mixed-use development along Erwin Road, particularly around the intersection with LaSalle Street, the area remains a mix of older and newer multifamily residential neighborhoods. Apartment complexes, many catering to Duke University graduate students, are located farther north of Erwin Road along Morreene Road and LaSalle Street. Additionally, some of the older, larger apartment complexes, where rent is relatively low, house large numbers of low income and Hispanic residents. Damar Court is a Durham Housing Authority public housing community on Morreene Road.

4.1.5.3 Crest Street

The Crest Street Community, formerly known as Hickstown for landowner Hawkins Hicks, retains much of its historic character as a small, closely-knit, predominately African-American community. The community is located just north of the Duke Medical Center and Durham VA Medical Center, between Fulton Street, Douglas Street, Erwin Road, and NC 147. The neighborhood has a strong community association, the Crest Street Community Council, and is a stable residential community of single-family homes, a large majority of which are owner-occupied. The community association owns and manages the neighborhood's one apartment building and two retirement centers.

4.1.6 Old West Durham/Duke East Campus Evaluation Area

The Old West Durham/Duke East Campus Evaluation Area includes Old West Durham, Duke East Campus and surrounding neighborhoods, Ninth Street, and the Burch Avenue area.

4.1.6.1 Old West Durham

The Old West Durham neighborhood stretches from Hillandale Road east to Broad Street and from NC 147 north to Englewood Avenue. The area around Erwin Mills, Ninth Street, and the Old Mill Village is listed on the National Register of Historic Districts. Homes are single-family, detached residences varying in style from bungalow to ranch to traditional. Residents in this area are a diverse mix of owners and renters from a variety of ethnic backgrounds.

4.1.6.2 Trinity Heights

The Trinity Heights neighborhood is bordered by Buchanan Boulevard, Markham Avenue, Broad Street, and Green Street next to Duke University's East Campus and between Trinity Park, Walltown, and West Durham neighborhoods. Housing construction in the Trinity Heights area began in the 1890s, and most homes were built by 1913. Most houses are Victorian or Neo-Classical in style. A number of bungalow style homes and apartment buildings were added in the 1920s. In 1985, Trinity Heights was listed on the National Register of Historic Places. In 1996, Duke University began to refurbish and sell some of the older houses it owned in Trinity Heights to its employees and to develop the vacant lot between Berkeley and Sedgefield Streets. The area is near the Ninth Street area and its shopping and restaurants, as well as all Duke campuses. Many residents are students or staff at Duke University. More than 60 percent of the residences are renter-occupied.

4.1.6.3 Ninth Street Area

The Ninth Street area is a mixed-use urban neighborhood between Duke University's Central and East Campuses. The cornerstone of the area is a three to four block long commercial corridor that features an eclectic mix of shops and restaurants and a rehabilitated historic textile warehouse converted to apartments and offices. The area also includes a five-story office building with structured parking and ground floor restaurants and retail, as well as a four to five story apartment complex approaching 60 units per acre. Traditional urban residential neighborhoods are within walking distance of the commercial district. In the *Durham Comprehensive Plan* and Unified Development Ordinance, the Ninth Street area is identified as a Compact Neighborhood.

4.1.6.4 Trinity Park

Trinity Park is located between Duke University's East Campus and downtown Durham within walking distance to Duke's East Campus. The neighborhood includes forty square blocks characterized by tree-lined streets and older homes in an urban setting. Houses are many styles, including Queen Anne, Victorian, Neo-Colonial, period revivals, and bungalows with Craftsman details. Some homes have been updated. The neighborhood has numerous historic homes and buildings and is listed on the National Register of Historic Places as the Trinity Historic District. Nearly 60 percent of residents are renters.

4.1.6.5 Burch Avenue

The Burch Avenue neighborhood is part of Durham's historic West End and extends from Willard Street to Swan Street and from Morehead Avenue north to Main Street. The neighborhood was originally established in the late 1800s and early 1900s and developed gradually between the turn of the 20th century and the 1950s. It features a wide range of historic house styles and sizes, including small- to mid-sized homes, historic duplexes, and rental properties. Its location between Duke's East and West campuses have made it a desirable neighborhood for University students and staff, and its proximity to downtown Durham and NC 147 has made the area attractive for young professionals working in downtown Durham or Research Triangle Park.

4.1.6.6 Duke University East Campus

Duke University East Campus houses all of the university's first-year undergraduate students. Campus housing consists of fourteen residence halls organized into four neighborhoods.

4.1.7 Downtown Durham Evaluation Area

The Downtown Durham Evaluation Area includes the Warehouse District, Central Park, Central Business District, Southside, Cleveland-Holloway and Morehead Hill areas. They are shown in Figure 4. A railroad corridor bisects the evaluation area. The Warehouse District, Central Park, and the Central Business District are located north of the rail corridor. Much of this area falls under the Downtown Durham Historic District, which imposes specific zoning and design standards to preserve its historic integrity. The make-ups of these neighborhoods consist of a mixture of both new and historic office, commercial, and residential buildings, some of which are mixed-use. Located to the south of the rail line are generally more large-scale entertainment focused venues, such as the American Tobacco Campus, Durham Bulls Athletic Park, and the Durham Performing Arts Center, as well as over 1 million square feet of office space and some apartments in and around the American Tobacco Campus. The newly opened Durham Amtrak Station and the recently completed Durham Intermodal Transportation Center (Durham Station) are located in this area. NC 147 also runs through the area, with the Southside and Morehead Hill neighborhoods to the south and Downtown Durham to the north. These communities south of the Freeway are primarily single-family residential.

4.1.7.1 Downtown Neighborhoods

The Central Business District is characteristic of many downtowns, with retail, restaurants, offices, churches, and residential in a compact urban setting. The district extends to Liberty Street and Fernway Avenue to the north, Fayetteville Street to the east, NC 147 to the south and west, and Morehead Avenue to the south. There are several large parking deck structures located in this area. Streetscape improvements, including widened sidewalks, street trees, benches, and lighting, were made to Downtown in 2007 in order to assist in the facilitation of a walkable city experience among these many venues.

Bounded by NC 147, Duke Street, West Pettigrew Street, and South Mangum Street are several large venues, including the Durham Performing Arts Center, Durham Bulls Athletic Park, and American Tobacco Campus. The American Tobacco Campus consists of former tobacco warehouses that have been rehabilitated into offices, restaurants, entertainment, and residential uses. Diamond View is a new commercial development adjacent to the American Tobacco Campus. Immediately surrounding the area are several large lot auto dealerships, as well as the Durham County Courthouse and other government service buildings.

The Warehouse District and Brightleaf Square anchor the western edge of this downtown neighborhood. The Warehouse District, generally the area between Duke Street and Morris Street, contains numerous old warehouses that have been converted to residential and commercial uses, with a variety of restaurants and bars. At Brightleaf Square, the former Watts and Yuille tobacco warehouses were redeveloped into retail, restaurant, and office space.

4.1.7.2 Morehead Hill

The Morehead Hill neighborhood is an early streetcar suburb that took shape in the early 1900s. The neighborhood is bound by Duke Street to the east, NC 147/West Chapel Hill Street to the north, Arnette Avenue to the west, and Wells Street to the south. It was once one of the more prestigious neighborhoods in the city with many business owners living adjacent to their businesses. The neighborhood includes an eclectic mix of residential structures from the early decades of the 20th

century. Residential homes in this neighborhood range from simple cottages to large mansions. Development over time has led to many of the homes being transformed into multi-family rental properties or businesses. South Duke Street and South Vickers Street are busy one-way thoroughfares that pass through this neighborhood linking downtown and additional suburban developments further south. Morehead Hill was named a National Historic District in 1985 (expanded in 2004); it is also a Local Historic District.

4.1.7.3 Cleveland-Holloway

The current neighborhood boundaries were published in the Cleveland-Holloway Neighborhood Plan, included in the Six Northeast Central Durham Neighborhood Plans document. Boundaries include Canal Street to the north of the neighborhood and Liberty Street to the south. Mangum Street marks the western boundary and railroad tracks mark the east.

Within Cleveland-Holloway, much of the land is zoned single-family residential. Commercial uses are located on the edge of the neighborhood, primarily along Mangum, Elizabeth, and Holloway Streets. Light industry is located adjacent to the railroad. Vacant and abandoned lots are also prevalent in the area.

4.1.7.4 Southside

Approximately 125 acres located on the southern edge of Downtown Durham just north of North Carolina Central University (NCCU) are being targeted for revitalization. The area contained the highest concentrations of vacant properties and one of the lowest rates of homeownership of all Durham neighborhoods. Phase I of the revitalization is underway with plans for the area including new infrastructure and 132 new multi-family rental units and 48 single-family homes for sale.

4.1.8 East Durham Evaluation Area

The East Durham Evaluation Area includes the campuses of NCCU and Durham Technical Community College (DTCC). The area also includes the Albright, Eastway Village, Goldenbelt, Edgemont, Southeast Central, Old East Durham, and Hoover Road/Owen Street neighborhoods.

4.1.8.1 Eastway Village/Albright

The Eastway Village and Albright neighborhoods are contiguous and located in the geographic center of Northeast Central Durham. Like most of Northeast Central Durham, the Eastway Village and Albright neighborhoods have experienced decades of decline and disinvestment.

Eastway Village is the area south of Holloway Street, west of North Hyde Park Avenue, north of Angier Avenue, and east of Railroad Street. The neighborhood has been transitioning; it contains a mixture of older single-family homes and new developments. As part of the Durham Housing Authority's HOPE VI program, 240 units in Few Gardens were demolished and replaced with 150 units on the original site. The area is known as Franklin Village. There are plans for additional redevelopment efforts that would affect a 96-block area in this part of Durham.

The Albright neighborhood is north of Eastway Village and is bound by Granby Street and Drew Street to the north, North Hyde Park Avenue to the east, Holloway Street to the south, and South Dillard Street to the west. There is primarily residential space on its far west and east sides. The Albright neighborhood

has a relatively high percentage of abandoned homes and vacant properties and has not had the ongoing redevelopment that Eastway Village has experienced. At the center of Albright is the Goose Creek watershed, which runs south to north through the center of East End Park, before turning northeast across the most northern blocks of the neighborhood. Large tracts of land along the creek are owned by the City of Durham. Goose Creek, which is a tributary of the Neuse River, has been affected by dumping, encroachment, and development over the years. Although segments of Goose Creek within the Eastway Village neighborhood to the south have been reclaimed and turned into aesthetic and recreational amenities, no such effort has yet been undertaken within Albright.

4.1.8.2 Golden Belt and East Durham

The Golden Belt Historic District and East Durham Historic District both overlay the Eastway Village Neighborhood. One of Durham's last remaining historic textile mills, the Golden Belt, was reused and redeveloped with artist studios, live/work loft apartments, offices, and retail, restaurant and event space. Adjacent vacant housing is also undergoing transition via renovation or replacement.

4.1.8.3 Edgemont

The Edgemont neighborhood was originally built to support the Durham Hosiery Mills and functioned as a company town. The neighborhood is bound by East Main Street to the north, South Plum Street to the east, Fayetteville Street to the west, and East Pettigrew Street to the south. Over time, many of the original mill homes fell into disrepair and were razed; only a few original homes remain in this neighborhood. This neighborhood has transitioned into a mixture of uses, with new single-family homes, apartments, and industrial uses on the southern edge near NC 147. A small strip of commercial businesses lines each side of Angier Avenue. A large church is located on the northeast corner lot at the intersection of Angier Avenue and Alston Avenue.

4.1.8.4 Southeast Central Durham

Southeast Central Durham is the area located south of NC 147 and bound by the Southside neighborhood to the west, DTCC to the east, and NCCU to the south. The neighborhood has been in a slow decline over the past 50 years and contains many abandoned homes and businesses. There are a few historic sites found within the area. The Durham Cotton Mills Village Historic District covers approximately 56 acres that are generally bound by Byrd and Middle Streets, East Frontage Road, and Reservoir Street. Fayetteville Street is designated as a local historic district; the Scarborough House is located within this neighborhood.

McDougald Terrace, a 360-unit public housing property, is the largest conventional public housing community in Durham. The 25-acre development was built in 1953. In the development, poverty and crime rates are the highest in the City of Durham. In 2012, the Durham Housing Authority was awarded a grant to support the development of a plan for revitalization, with the goal of replacing distressed public housing with high quality mixed income housing. The target area is bound by NC 147, North Bacon Street, East Elmira Street, and South Roxboro Street, including McDougald Terrace.

NCCU's historic campus is also listed on the National Register of Historic Places. NCCU is a historically black university and part of the University of North Carolina system. The compact campus has twelve residence halls with space able to house 2,866 on-campus residents.

4.1.8.5 Old East Durham

The East Durham Historic District is located within the larger Old East Durham neighborhood in the southeast section of the city, approximately a mile from the urban center. According to the National Register of Historic Places, the official Historic District is rectangular, bounded by the Southern Railway tracks to the south, North Guthrie Avenue to the east, Holloway Street to the north, and Hyde Park Avenue and South Plum Street to the west. At over 3.5 square miles, Old East Durham is one of the largest neighborhoods in Northeast Central Durham. The neighborhood contains mostly single-family residential with a few multi-family units intermixed. Portions of the district within the study area are primarily office/institutional and light industrial.

4.1.8.6 Hoover Road/Owen Street Neighborhood

The Hoover Road neighborhood is located in Northeast Central Durham near NC 147. The borders of the neighborhood include the railroad tracks to the south, Salem Road to the west, Ashe Street on the north, and the Ashe Street/Hoover Road intersection on the east. The eastern portion of the neighborhood is within the study area and contains a mix of commercial and single-family homes north of Angier Avenue. South of Angier Avenue many of the lots appear to be vacant. Along with the single-family homes, the neighborhood also includes the Hoover Road Apartments, which were built in 1968 and are part of Durham's Conventional Public Housing Program. The apartments have 54 units as well as a common area operated by Durham's Parks and Recreation Department.

4.2 Community Resources

Community resources located within the study area are discussed in this section. As noted earlier, some resources only partially within or adjacent to the study area are included as well. These resources provide basic needs and services to communities and neighborhoods in the area. The discussion is organized by resource, and a complete inventory and mapping of community resources is included in appendix B. Community resources inventoried within the study area include:

- Educational facilities
- Churches and places of worship
- Public safety services and facilities
- Medical and social service facilities
- Community recreational and event resources
- Access to transit and transit routes
- Other government facilities
 - Government offices
 - Libraries
 - Post offices

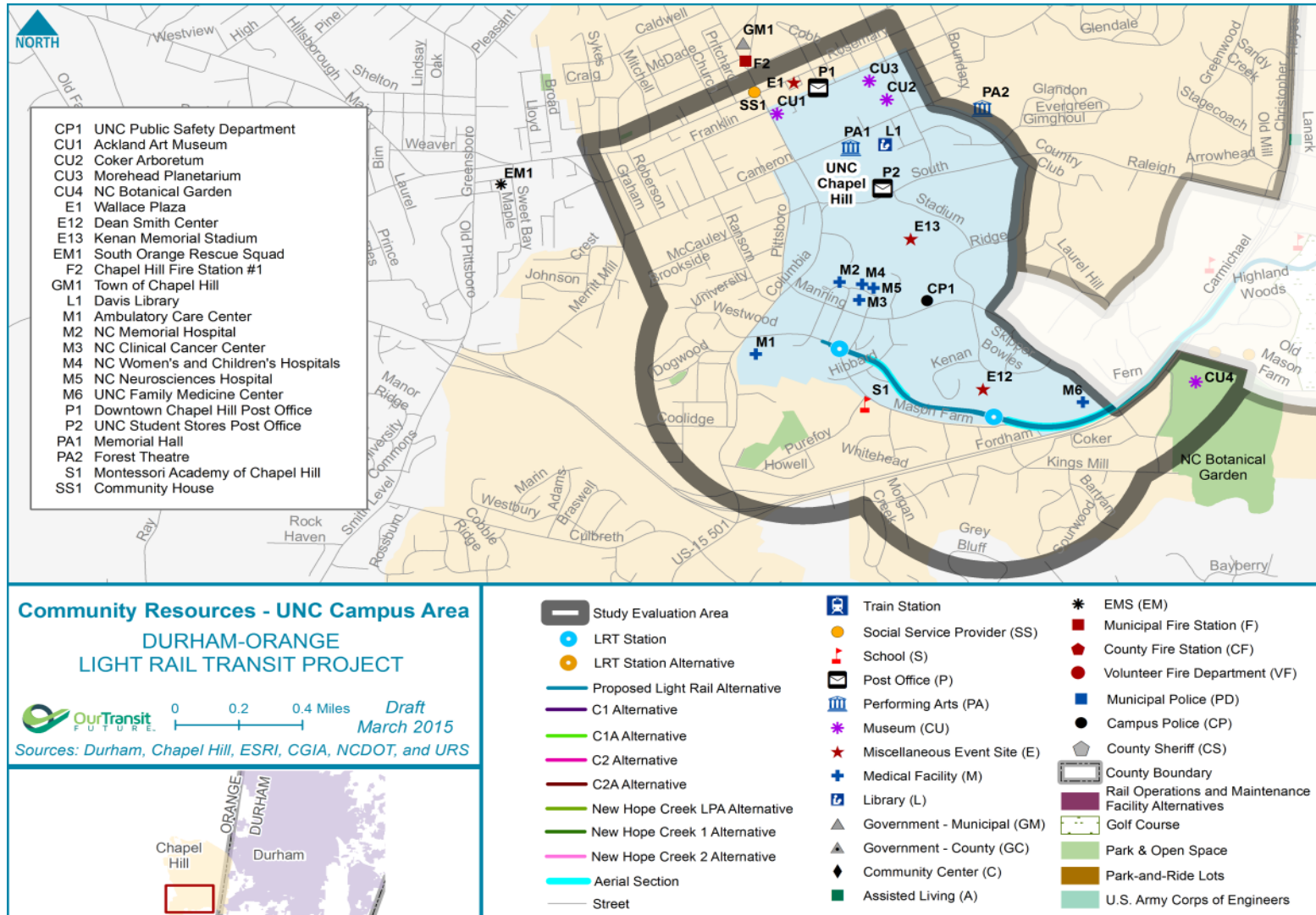
4.2.1 UNC Campus Evaluation Area

Table 1 and Figure 5 present the community resources in this evaluation area.

Table 1: UNC Campus Area Community Resources

Type of Resource	Name	Location	Map ID
Schools	University of North Carolina at Chapel Hill	Chapel Hill	N/A
	Montessori Academy of Chapel Hill and daycare	1200 Mason Farm Road, Chapel Hill	S1
Public Safety and Services	UNC Public Safety Department	285 Manning Drive, Chapel Hill	CP1
	South Orange Rescue Squad	202 Roberson Street, Carrboro	EM1
	Chapel Hill Fire Station #1	403 Martin Luther King Jr. Parkway, Chapel Hill	F2
Medical Facilities	Ambulatory Care Center	102 Mason Farm Road, Chapel Hill	M1
	NC Memorial Hospital	101 Manning Drive, Chapel Hill	M2
	NC Clinical Cancer Center	101 Manning Drive, Chapel Hill	M3
	NC Women’s and Children’s Hospitals	101 Manning Drive, Chapel Hill	M4
	UNC Neurosciences Hospital	101 Manning Drive, Chapel Hill	M5
	UNC Family Medicine Center	590 Manning Drive, Chapel Hill	M6
Social Services	Community House	100 West Rosemary Street, Chapel Hill	SS1
Special Event Facilities	Ackland Art Museum	101 South Columbia Street, Chapel Hill	CU1
	Coker Arboretum	100 Old Mason Farm Road, Chapel Hill	CU2
	Morehead Planetarium	250 East Franklin Street, Chapel Hill	CU3
	Wallace Plaza	150 East Rosemary Street, Chapel Hill	E1
	Kenan Memorial Stadium	104 Stadium Drive, Chapel Hill	E13
	Dean Smith Center	300 Skipper Bowles Drive, Chapel Hill	E12
	Memorial Hall	141 East Cameron Avenue, Chapel Hill	PA1
	Forest Theatre	23 South Boundary Street, Chapel Hill	PA2
	NC Botanical Gardens – Reeves Auditorium	100 Old Mason Farm Road, Chapel Hill	CU4
Post Offices	Downtown Chapel Hill	179 East Franklin Street, Chapel Hill	P1
	UNC Student Stores	207 South Road, Chapel Hill	P2
Libraries	Davis Library & UNC University Libraries	208 Raleigh Street and various locations on UNC campus	L1
County and Municipal Offices	Town of Chapel Hill	405 Martin Luther King Jr. Parkway, Chapel Hill	GM1

Figure 5: UNC Campus Area Community Resources





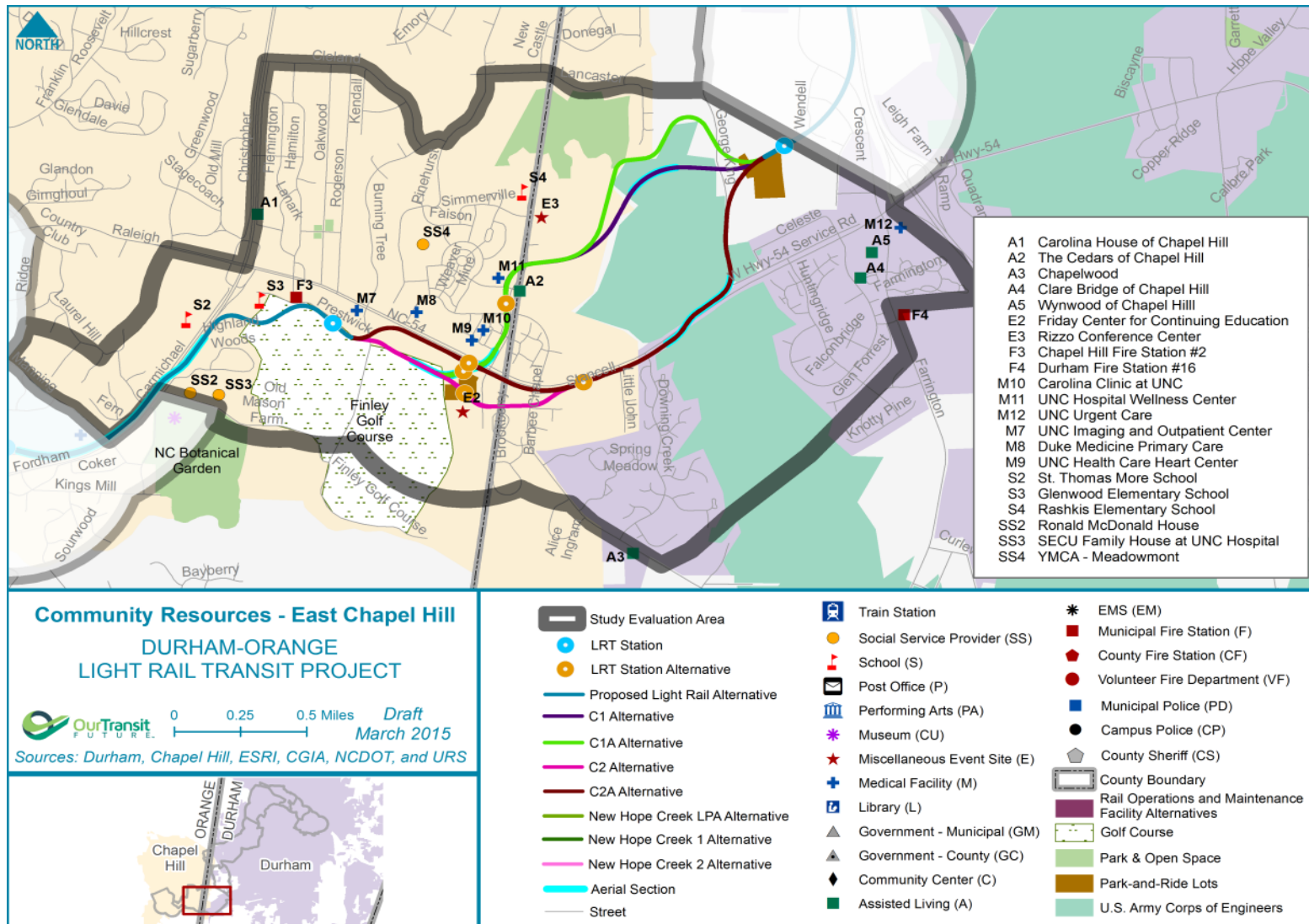
4.2.2 East Chapel Hill Evaluation Area

Table 2 and Figure 6 present the community resources in this evaluation area.

Table 2: East Chapel Hill Community Resources

Type of Resource	Name	Location	Map ID
Schools	Glenwood Elementary School	2 Prestwick Road, Chapel Hill	S3
	Rashkis Elementary School	601 Meadowmont Lane, Chapel Hill	S4
	St. Thomas More School	920 Carmichael Street, Chapel Hill	S2
Public Safety and Services	Chapel Hill Fire Station #2	1003 South Hamilton Road, Chapel Hill	F3
	Durham Fire Station #16	6303 Farrington Road, Durham	F4
Medical Facilities	UNC Imaging and Outpatient Center	1350 Raleigh Road, Chapel Hill	M7
	UNC Health Care Heart Center	300 Meadowmont Village Circle, Chapel Hill	M9
	Carolina Clinic at UNC	315 Meadowmont Village Circle, Chapel Hill	M10
	UNC Hospital Wellness Center	100 Sprunt Street, Chapel Hill	M11
	UNC Urgent Care	6013 Farrington Road, Chapel Hill	M12
	Duke Medicine Primary Care	801 West Barbee Chapel Road, Chapel Hill	M8
Social Services	Ronald McDonald House	101 Old Mason Farm Road, Chapel Hill	SS2
	SECU Family House at UNC Hospital	123 Old Mason Farm Road, Chapel Hill	SS3
	YMCA – Meadowmont	301 Old Barn Lane, Chapel Hill	SS4
Senior Services and Facilities	Carolina House of Chapel Hill	100 Lanark Road, Chapel Hill	A1
	The Cedars of Chapel Hill Retirement Community	100 Cedar Club Circle, Chapel Hill	A2
	Chapelwood	205 Hales Wood Road, Chapel Hill	A3
	Clare Bridge of Chapel Hill	2230 Farmington Drive, Chapel Hill	A4
	Wynwood of Chapel Hill	2220 Farmington Drive, Chapel Hill	A5
Special Event Facilities	Paul J. Rizzo Conference Center	150 DuBose House Lane, Chapel Hill	E3
	William and Ida Friday Center for Continuing Education	100 Friday Center Drive, Chapel Hill	E2

Figure 6: East Chapel Hill Community Resources





4.2.3 Leigh Village Evaluation Area

Table 3 and Figure 7 present the community resources in this evaluation area.

Table 3: Leigh Village Community Resources

Type of Resource	Name	Location	Map ID
Schools	Creekside Elementary School	5321 Ephesus Church Road, Durham	S5
	Montessori Community School	4512 Pope Road, Durham	S6
Special Event Facilities	Patterson’s Mill Country Store	5109 Farrington Road, Chapel Hill	E4

4.2.4 US 15-501 Corridor Evaluation Area

Table 4 and Figure 8 present the community resources in this evaluation area.

Table 4: US 15-501 Corridor Community Resources

Type of Resource	Name	Location	Map ID
Schools	Sherwood Githens Middle School	4800 Old Chapel Hill Road, Durham	S7
	Durham Academy (Middle School)	3116 Academy Road, Durham	S12
	Montessori Children’s House of Durham	2800 Pickett Road, Durham	S10
	Sandra E. Lerner Jewish Community School	1935 Cornwallis Road, Durham	S15
Public Safety and Services	Durham Police Department – District 3	8 Consultant Place, Durham	PD2
	Durham County Fire Station (Parkwood)	4200 Farrington Road, Durham	CF2
	Parkwood EMS Station 2	4200 Farrington Road, Durham	EM2
Medical Facilities	Duke Medical Plaza Patterson Place	5324 McFarland Drive, Durham	M13
	North Carolina Orthopedic Clinic	3609 SW Durham Drive, Durham	M14
	Southwest Durham Family Medicine	3612 Shannon Road, Durham	M15
	Structure House	3017 Pickett Road, Durham	M17
Social Services	Goodwill Community Foundation	4318 Garret Road, Durham	SS5
	Social Security Administration Building	3004 Tower Boulevard, Durham	SS7
	Caring House	2625 Pickett Road, Durham	SS8
Senior Services and Facilities	Carillon Assisted Living of Durham	4713 Garrett Road, Durham	A6
	Durham Regent Retirement Community	3007 Pickett Road, Durham	A8
	Forest at Duke Assisted Living	2701 Pickett Road, Durham	A9
Community Centers	Levin Jewish Community Center	1937 West Cornwallis Road, Durham	C1
Post Offices	Shannon Road Post Office	3710 Shannon Road, Durham	P4
Libraries	Southwest Regional Library	3605 Shannon Road, Durham	L3

Figure 7: Leigh Village Area Community Resources

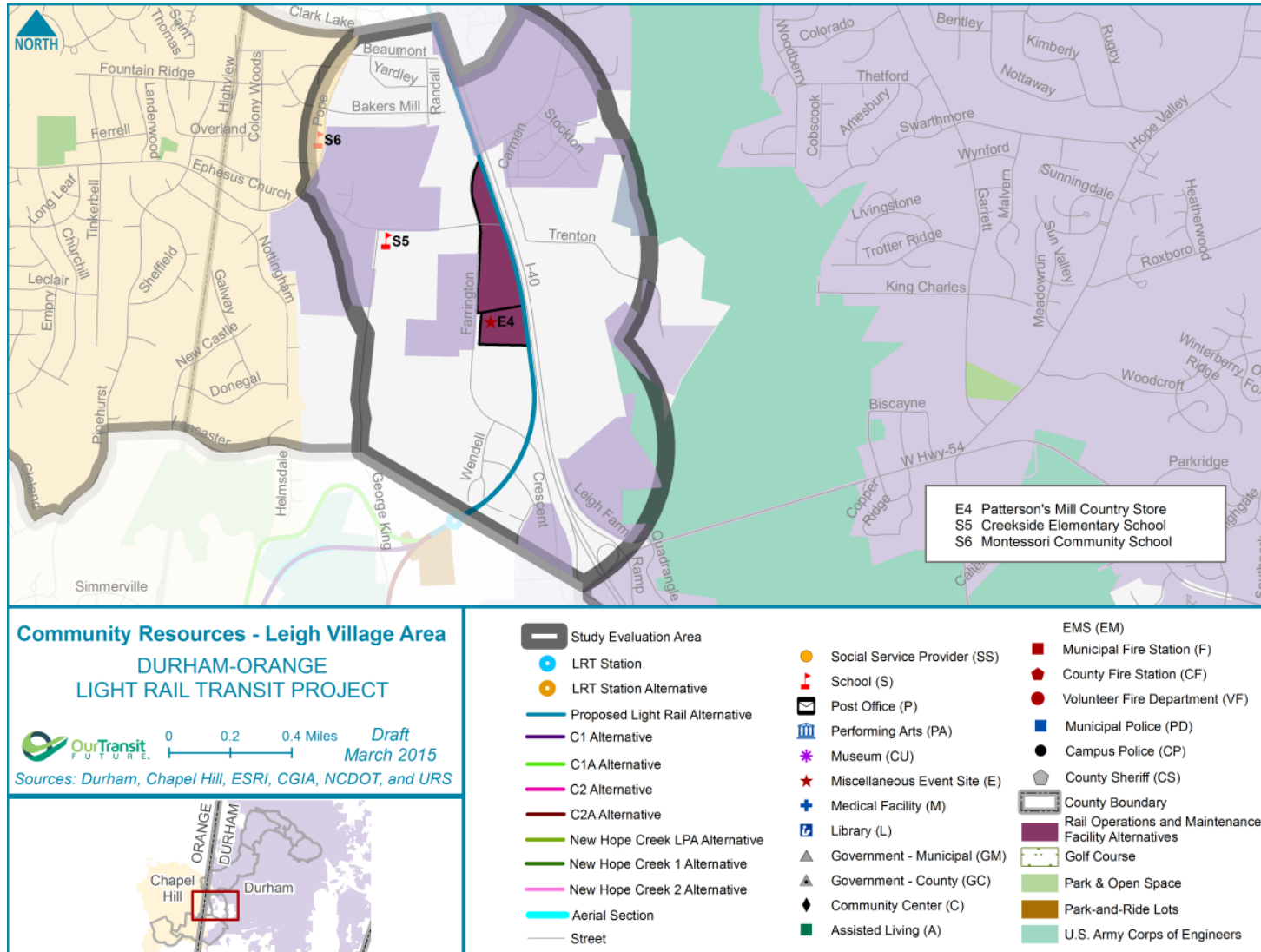
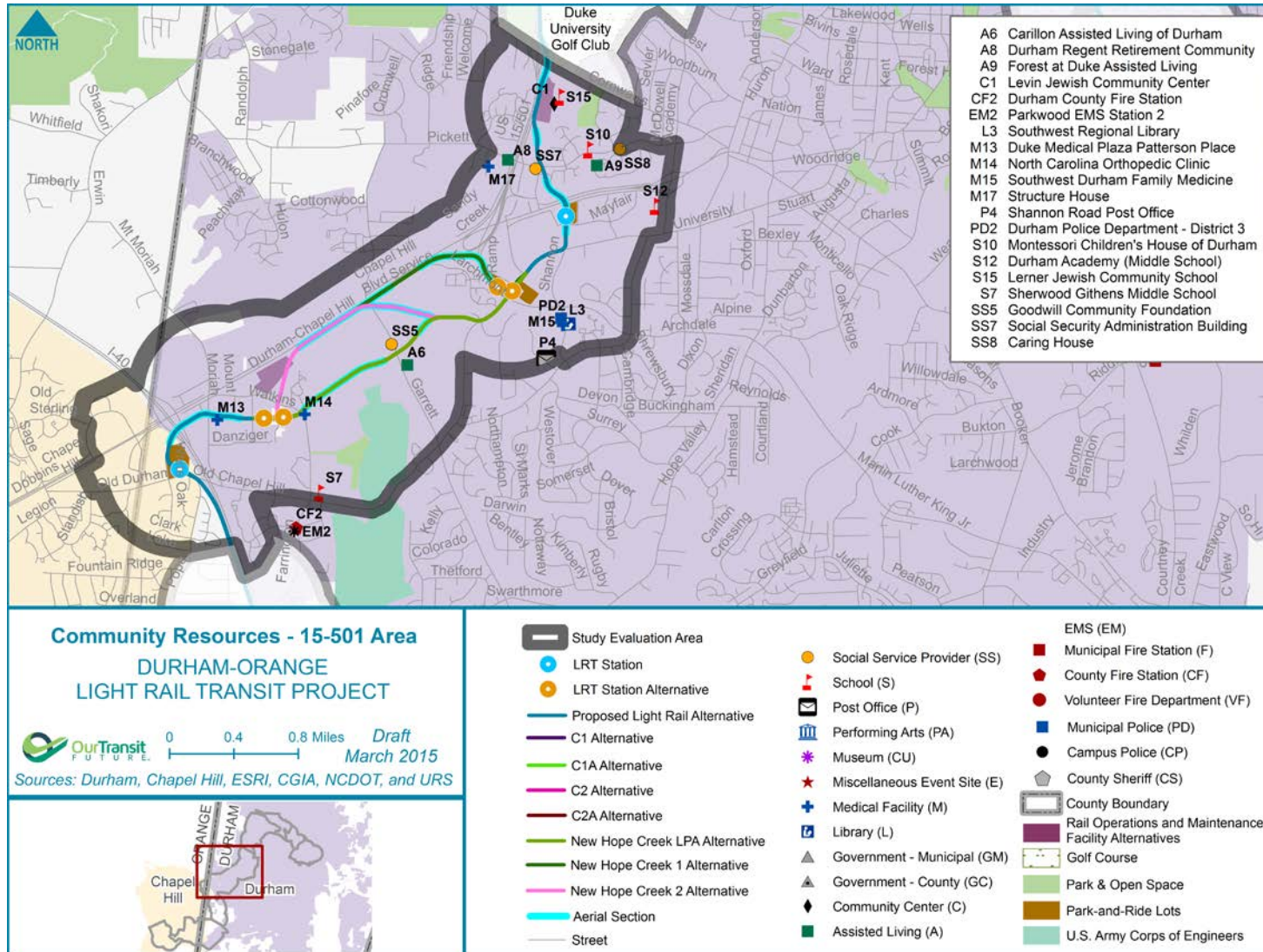


Figure 8: US 15-501 Community Resources



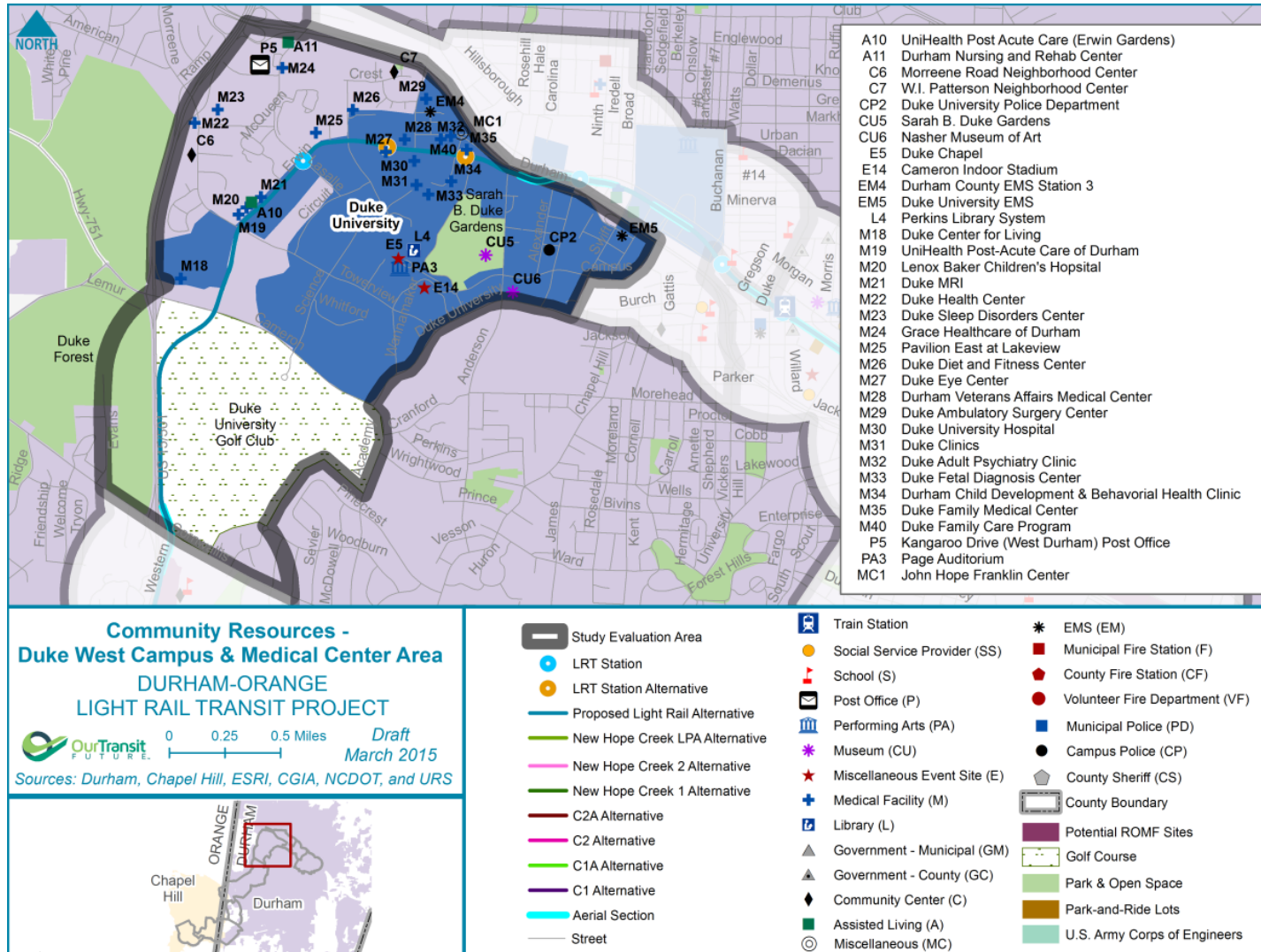
4.2.5 Duke West Campus and Medical Center Evaluation Area

Table 5 and Figure 9 present the community resources in this evaluation area.

Table 5: Duke West Campus and Medical Center Community Resources

Type of Resource	Name	Location	Map ID
School	Duke University	Durham	N/A
Public Safety and Services	Durham County EMS Station 3	2400 Pratt Street, Durham	EM4
	Duke University EMS	301 Swift Avenue, Townhouse #3, Durham	EM5
	Duke University Police Department	502 Oregon Street, Durham	CP2
Medical Facilities	Duke Center for Living	3475 Erwin Road, Durham	M18
	Lenox Baker Children’s Hospital	3000 Erwin Road, Durham	M20
	Duke MRI	3000 Erwin Road, Durham	M21
	Duke Health Center	932 Morreene Road, Durham	M22
	Duke Sleep Disorders Center	2800 Campus Walk Avenue, Durham	M23
	Pavilion East at Lakeview	2608 Erwin Road, Durham	M25
	Duke Diet and Fitness Center	501 Douglas Street, Durham	M26
	Duke Eye Center	2351 Erwin Road, Durham	M27
	Duke Ambulatory Surgical Center	120 East Carver Street, Durham	M29
	Duke University Hospital	2301 Erwin Road, Durham	M30
	Duke Clinics	40 Duke Medicine Circle, Durham	M31
	Duke Adult Psychiatry Clinic	2213 Elba Street, Durham	M32
	Duke Fetal Diagnosis Center	200 Trent Drive, Durham	M33
	Durham Child Development and Behavioral Health Clinic	402 Trent Drive, Durham	M34
	Duke Family Medical Center	2100 Erwin Road, Durham	M35
	Duke Family Care Program	2222 Erwin Road, Durham	M40
	UniHealth Post-Acute Care of Durham	3100 Erwin Road, Durham	M19
Grace Healthcare of Durham	411 South LaSalle Street, Durham	M24	
Durham VA Medical Center	508 Fulton Street, Durham	M28	
Senior Services and Facilities	UniHealth Post-Acute Care (Erwin Gardens)	3100 Erwin Road, Durham	A10
	Durham Nursing & Rehab Center (Grace Healthcare Center)	411 South LaSalle Street, Durham	A11
Community Centers	Morreene Road Neighborhood Center	1102 Morreene Road, Durham	C6
	W.I. Patterson Neighborhood Center	2614 Crest Street, Durham	C7
Special Event Facilities	Page Auditorium	402 Chapel Drive, Durham	PA3
	Cameron Indoor Stadium	301 Whitford Drive, Durham	E14
	Duke Chapel	401 Chapel Drive, Durham	E5
	Sarah B. Duke Gardens	420 Anderson Street, Durham	CU5
	Nasher Museum of Art	2001 Campus Drive, Durham	CU6
	John Hope Franklin Center	2204 Erwin Road, Durham	MC1
Post Offices	Kangaroo Drive (West Durham) Post Office	3520 Kangaroo Drive, Durham	P5
Libraries	Perkins Library System	411 Chapel Drive, Durham and various locations on Duke University campus	L4

Figure 9: Duke West Campus and Medical Center Community Resources



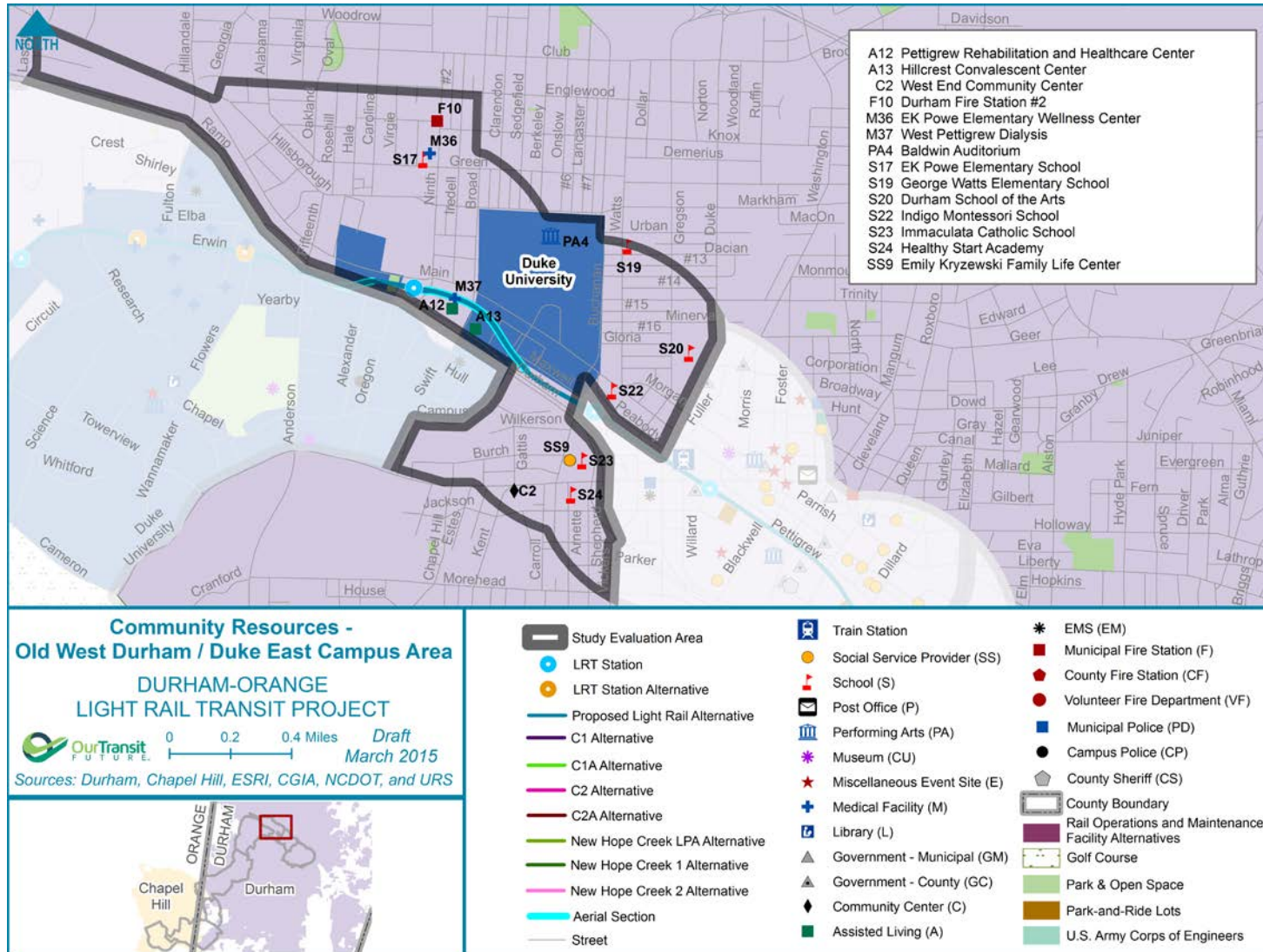
4.2.6 Old West Durham/Duke East Campus Evaluation Area

Table 6 and Figure 10 present the community resources in this evaluation area.

Table 6: Old West Durham/Duke East Campus Community Resources

Type of Resource	Name	Location	Map ID
School	Duke University	Durham	N/A
	EK Powe Elementary School	913 Ninth Street, Durham	S17
	George Watts Elementary School	700 Watts Street, Durham	S19
	Durham School of the Arts Magnet Middle & High School	401 N. Duke Street, Durham	S20
	Healthy Start Academy (Charter School)	807 West Chapel Hill Street, Durham	S24
	Indigo Montessori School	1101 West Main Street, Durham	S22
	Immaculata Catholic School	721 Burch Avenue, Durham	S23
Public Safety and Services	Durham Fire Station #2	1001 Ninth Street, Durham	F10
Medical Facilities	West Pettigrew Dialysis Center	1515 West Pettigrew Street, Durham	M37
	EK Powe Elementary Wellness Center	913 Ninth Street, Durham	M36
Social Services	Emily Krzyzewski Family Life Center	904 West Chapel Hill Street, Durham	SS9
Senior Services and Facilities	Pettigrew Rehabilitation and Healthcare Center	1515 West Pettigrew Street, Durham	A12
	Hillcrest Convalescent Center	1417 West Pettigrew Street, Durham	A13
Community Centers	West End Community Center	705 Kent Street, Durham	C2
Special Event Facilities	Baldwin Auditorium	1336 Campus Drive, Durham	PA4

Figure 10: Old West Durham/Duke East Campus Community Resources



4.2.7 Downtown Durham Evaluation Area

Table 7 and Figure 11 present the community resources in this evaluation area.

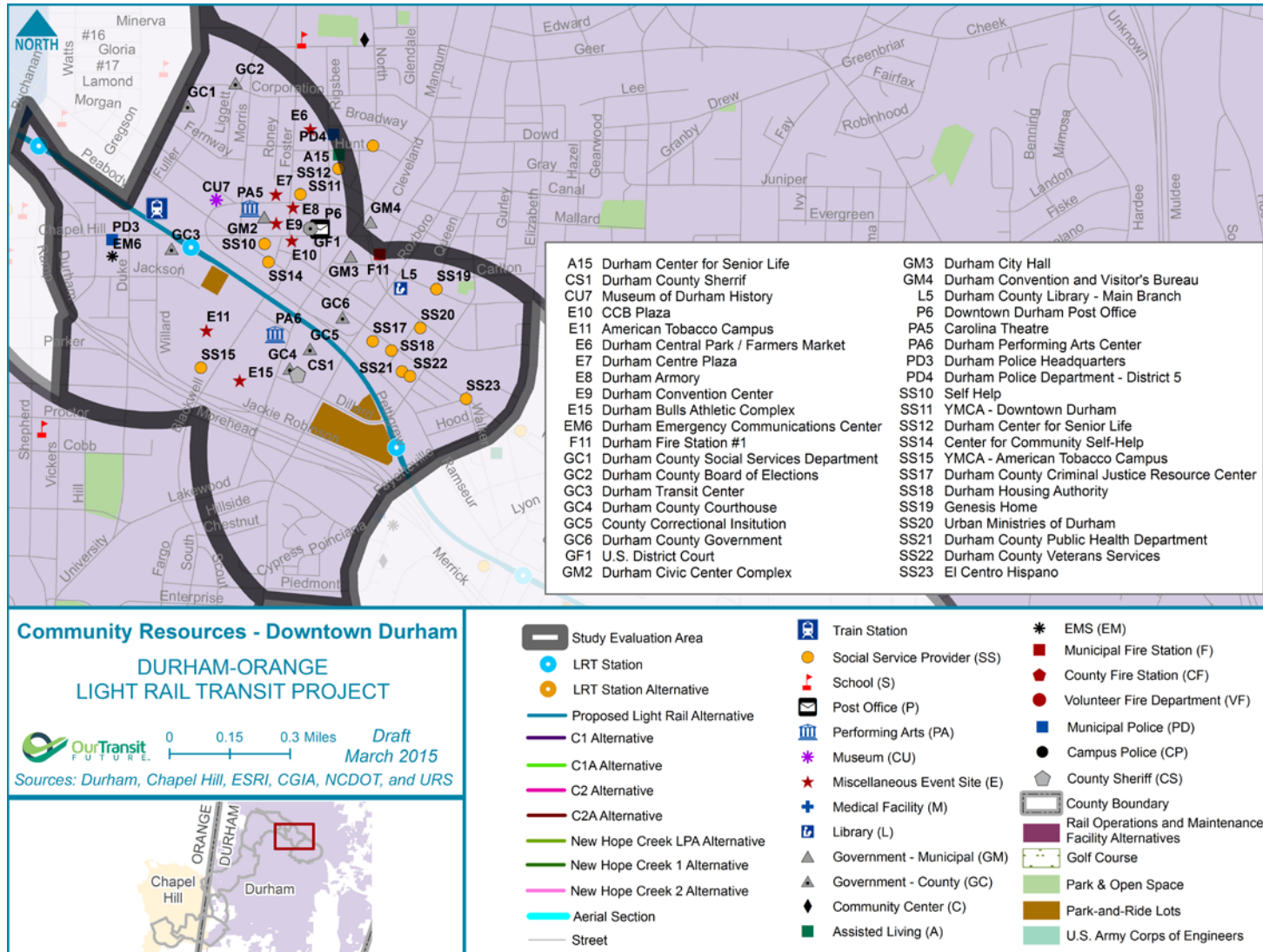
Table 7: Downtown Durham Community Resources

Type of Resource	Name	Location	Map ID
Public Safety and Services	Durham Emergency Communications Center	505 West Chapel Hill Street, Durham	EM6
	Durham Fire Station #1	139 East Morgan Street, Durham	F11
	Durham Police Headquarters	505 West Chapel Hill Street	PD3
	Durham Police Department – District 5	516 Rigsbee Avenue, Durham	PD4
	Durham County Sheriff	510 South Dillard Street, Durham	CS1
Social Services	Self Help	301 West Main Street, Durham	SS10
	YMCA - Downtown Durham	218 West Morgan Street, Durham	SS11
	Durham Center for Senior Life	406 Rigsbee Avenue, Durham	SS12
	Durham County Criminal Justice Resource Center	326 East Main Street, Durham	SS17
	Durham Housing Authority	330 East Main Street, Durham	SS18
	Center for Community Self-Help	301 West Main Street, Durham	SS14
	YMCA – American Tobacco Campus	410 Blackwell Street, Durham	SS15
	Genesis Home	300 North Queen Street, Durham	SS19
	Urban Ministries of Durham	410 Liberty Street, Durham	SS20
	Durham County Public Health Department	414 East Main Street, Durham	SS21
	Durham County Veterans Services	414 East Main Street, Durham	SS22
El Centro Hispano	600 East Main Street, Durham	SS23	
Senior Services and Facilities	Durham Center for Senior Life	406 Rigsbee Avenue, Durham	A15
Special Event Facilities	Durham Central Park/Farmers Market	501 Foster Street, Durham	E6
	Museum of Durham History	500 West Main Street, Durham	CU7
	Carolina Theatre	319 N. Chestnut Street, Durham	PA5
	Durham Centre Plaza	300 West Morgan Street, Durham	E7
	Durham Armory	212 Foster Street, Durham	E8
	Durham Convention Center	301 West Morgan Street, Durham	E9
	CCB Plaza	201 North Corcoran Street, Durham	E10
	American Tobacco Campus	318 Blackwell Street, Durham	E11
	Durham Bulls Athletic Complex	409 Blackwell Street, Durham	E15
Durham Performing Arts Center	123 Vivian Street, Durham	PA6	
Federal Government Office	US District Court	323 East Chapel Hill Street, Durham	GF1
Post Offices	Downtown Durham	323 East Chapel Hill Street, Durham	P6
County and Municipal Offices	Durham County Social Services Department	300 North Duke Street, Durham	GC1
	Durham County Board of Elections	706 West Corporation Street, Durham	GC2
	Durham Transit Center	515 West Pettigrew Street, Durham	GC3
	Durham Civic Center Complex	301 West Morgan Street, Durham	GM2
	Durham City Hall	101 City Hall Plaza, Durham	GM3
	Durham Convention & Visitor’s Bureau	101 East Morgan Street, Durham	GM4



Type of Resource	Name	Location	Map ID
	Durham County Courthouse	200 E Main Street, Durham	GC4
	Durham County Correctional Institution	219 South Mangum Street, Durham	GC5
	Durham County Government	501 South Dillard Street, Durham	GC6
Libraries	Durham County Library - Main Branch	300 North Roxboro Street, Durham	L5

Figure 11: Downtown Durham Community Resources



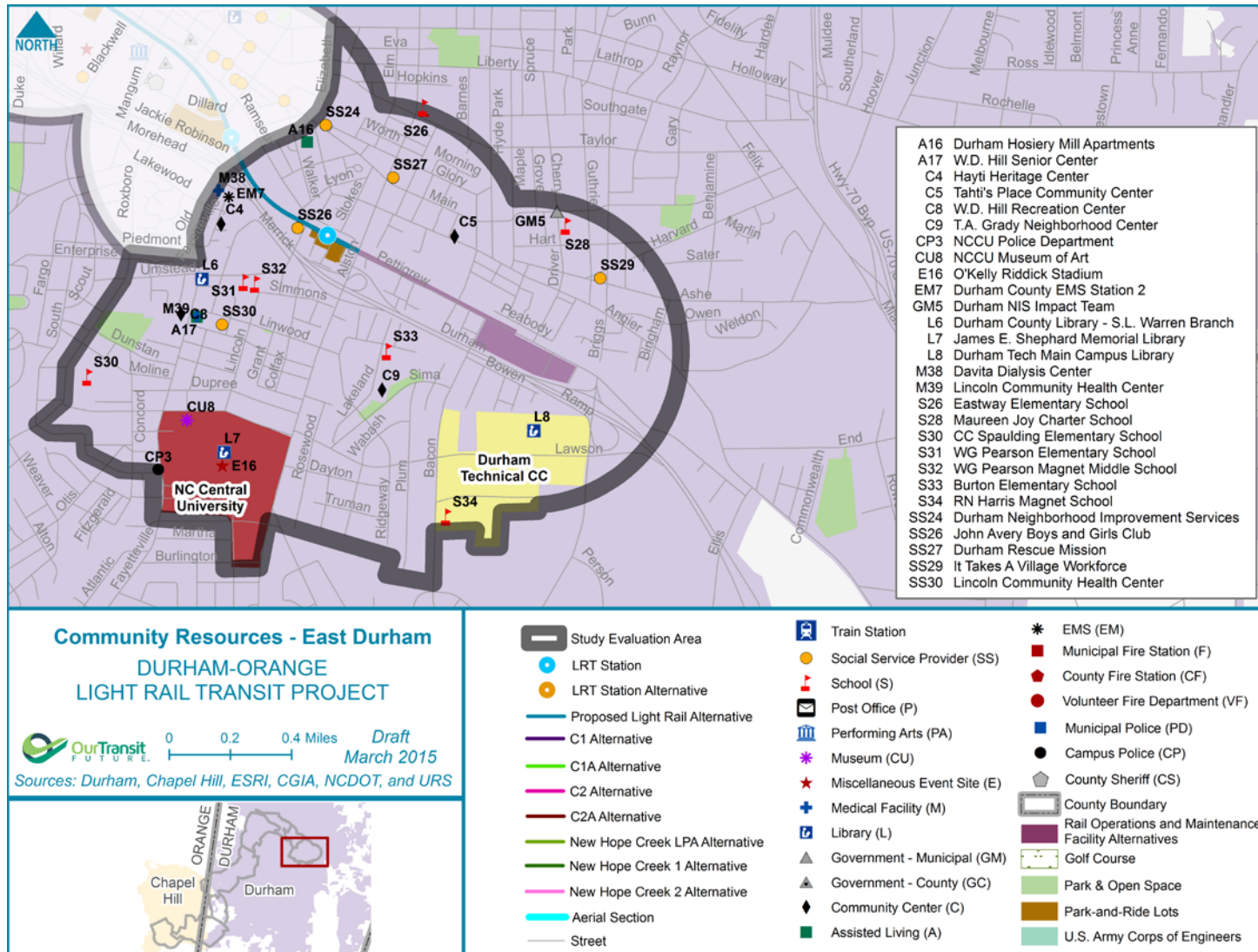
4.2.8 East Durham Evaluation Area

Table 8 and Figure 12 present the community resources in this evaluation area.

Table 8: East Durham Community Resources

Type of Resource	Name	Location	Map ID
Schools	North Carolina Central University (NCCU)	1801 Fayetteville Road, Durham	N/A
	Eastway Elementary School	610 Alston Avenue, Durham	S26
	CC Spaulding Elementary School	1531 S Roxboro Street, Durham	S30
	W.G. Pearson Elementary School	3501 Fayetteville Road, Durham	S31
	W.G. Pearson Magnet Middle School	600 East Umstead Street, Durham	S32
	Burton Elementary School	1500 Mathison Street, Durham	S33
	RN Harris Magnet School	1520 Cooper Street, Durham	S34
	Durham Technical Community College	1637 Lawson Street, Durham	N/A
	Maureen Joy Charter School	107 South Driver Street, Durham	S28
Public Safety and Services	Durham County EMS Station 2	615 Old Fayetteville Street, Durham	EM7
	NCCU Police Department	2010 Fayetteville Road, Durham	CP3
Medical Facilities	DaVita Dialysis Center	601 Fayetteville Road, Durham	M38
	Lincoln Community Health Center	1301 Fayetteville Road, Durham	M39
Social Services	John Avery Boys & Girls Club (United Way Boys and Girls Clubs of America)	808 East Pettigrew Street, Durham	SS26
	Durham Rescue Mission	1201 East Main Street, Durham	SS27
	It Takes A Village Workforce	2207 Ashe Street, Durham	SS29
	Lincoln Community Health Center	1301 Fayetteville Road, Durham	SS30
Senior Services and Facilities	Durham Hosiery Mill Apartments	804 Angier Avenue, Durham	A16
	W.D. Hill Senior Center	1308 Fayetteville Road, Durham	A17
Community Center	W.D. Hill Recreation Center	1308 Fayetteville Road, Durham	C8
	T.A. Grady Neighborhood Center	531 Lakeland Street, Durham	C9
	Hayti Heritage Center	804 Old Fayetteville Street, Durham	C4
	Tahti's Place Community Center	1607 Angier Avenue, Durham	C5
Special Event Facilities	NCCU Museum of Art	NCCU Campus	CU8
	O'Kelly Riddick Stadium	NCCU Campus	E16
County and Municipal Offices	Durham Neighborhood Improvement Services Impact Team	Driver Street, Durham	GM5
Libraries	Durham County Library - S.L. Warren Branch	1201 Fayetteville Road, Durham	L6
	James E. Shepherd Memorial Library	NCCU Campus	L7
	Durham Tech Main Campus Library	1637 Lawson Street, Durham	L8

Figure 12: East Durham Community Resources





5. Environmental Consequences

This section discusses the effects the No-Build and Light Rail Alternatives would have on neighborhoods and community resources in the study area. The following sections describe potential direct effects of the project alternatives on these resources. Secondary and cumulative effects on these resources are described in the *Durham-Orange Light Rail Transit Project DEIS (2015)*, section 4.17.

5.1 No-Build Alternative

The No-Build Alternative includes other transportation projects that are presumed to be constructed – even if the proposed D-O LRT Project is not built. The No-Build Alternative provides the baseline for establishing the environmental impacts of the alternatives. Impacts are expected with the future implementation of those planned roadway and transportation projects. The sponsor(s) of those projects will perform environmental studies as required by law.

Under the No-Build Alternative, neighborhoods and community resources in the study area would not benefit from enhanced access to transit that would be associated with implementation of the proposed D-O LRT Project.

5.2 Light Rail Alternatives

Generally, the Light Rail Alternatives would improve mobility and access for all of the communities, including access to community facilities. Other impacts from the Light Rail Alternatives vary by location, as well as by alignment alternative, station location, and ROMF location. The introduction of the physical elements of the proposed Light Rail Alternatives, when proximate to neighborhoods and community resources would have potential to cause both positive and negative impacts. The proposed Light Rail Alternatives would include new stations, park-and-ride facilities, substations, maintenance facility, trackwork, and an overhead catenary system located along neighborhoods within the corridor and would result in permanent physical changes in the corridor, as well as changes to local traffic operations and street patterns. More detailed discussion of impacts by Evaluation Area is found in sections 5.2.1 through 5.2.8, and a summary of potential impacts in each area is included in Table 8.

The following is a summary of effects that could be expected throughout the corridor from implementing the Light Rail Alternatives.

Access and mobility

As the proposed Light Rail Alternatives follow existing roadways or rail corridors in many locations, widespread negative impacts to automobile travel patterns and mobility are not anticipated. The proposed project would be grade-separated at several major roadways to eliminate most conflicts between vehicular traffic and the proposed Light Rail Alternatives. In addition, new signals and the addition of turn lanes would help to alleviate vehicular traffic conflicts resulting from the project.

However, there would be some changes to roadway alignments and traffic operations associated with the project within some of the Neighborhood Evaluation Areas that would have localized impacts on travel. For example, construction of the proposed project within the medians of University Boulevard and Erwin Road would restrict left turns across the roadway from some side streets, and motorists in these restricted locations would be allowed to make turns and u-turns at signalized intersections but



would be required to drive a minimal distance to make permitted turns. In addition, there are locations where the project would cross streets at-grade and require motorists to wait for the light rail traffic to pass. Between Chapel Hill Street and Dillard Street, the Light Rail Alternatives would be located along Pettigrew Street and Pettigrew Street would be reduced to one eastbound lane. These changes are discussed in more detail in the sections below.

Generally, mobility for transit patrons, bicycles, and pedestrians would be positively affected by the proposed project by providing another mode of transportation for residents and a more efficient option to automobile and bus travel. Pedestrian infrastructure improvements (sidewalks, crossings, etc.) are also proposed near the proposed stations.

Community Cohesion

Generally, the Light Rail Alternative would be located along neighborhood boundaries and/or along an existing transportation corridor. As a result, the proposed project would not create a new physical barrier to neighborhood residents or physically divide neighborhoods. The exceptions are the C1/C1A Alternatives, which would run along Meadowmont Lane and south of Green Cedar Lane through the Meadowmont neighborhood and include a station within the neighborhood. This impact is discussed further in section 5.2.2 below.

Community Facilities

Direct impacts to community facilities are generally avoided. Accessibility changes, as described above, could result in the vicinity of some facilities; however, access would not be permanently removed. Many community facilities, such as event facilities, entertainment, and sports venues, would benefit from enhanced access to transit. One school would experience negative impacts. The Light Rail Alternative alignment would pass directly behind Glenwood Elementary School, which is located near the intersection of Fordham Boulevard and NC 54. While the alignment would pass through a wooded area behind the school and would not require property acquisition from the school parcel, it would create a barrier between the school and adjacent residential areas.

Residential property displacements and acquisitions

Property acquisitions would be required for development of the proposed Light Rail Alternatives. Acquisitions would be required along most of the proposed alignment and for development of the station areas and parking facilities. Where possible, the alignment is located within or adjacent to existing transportation right-of-way to minimize property acquisition and displacements.

Visual Quality

The proposed Light Rail Alternatives would introduce a new visual element in close proximity to many neighborhoods. However, concern for visual/aesthetic impacts to neighborhoods is low, largely because of existing land uses (office and institutional buildings, historic warehouses, wooded areas, etc.) that screen residential areas from the proposed alignment. Individual visual and aesthetic impacts may occur at various sites along the proposed corridor; however, those individual impacts do not constitute an effect on the overall visual and aesthetic quality of a neighborhood. Details of visual impacts are in the *Aesthetics and Visual Quality Technical Report*.

Noise & Vibration



A noise and vibration impact assessment was conducted and is detailed in the *Durham-Orange Light Rail Transit Project DEIS* (2015), section 4.10 and appendix K24 *Noise and Vibration Technical Report*. The noise assessment included noise from all possible sources, including light rail, light rail bells, station park-and-ride lots, traction power substation (TPSS), and the ROMF. The assessment included comparing the project-related noise levels to the existing noise levels in order to determine human reaction to the amount of change. The three possible outcomes to the detailed noise assessment included no impact, moderate impact, and severe impact. The Light Rail Alternatives would have moderate noise impacts at three locations and severe impacts at one location; the C1 Alternative would have a severe impact at one location; the C1A Alternative would have a moderate impact at one location; the C2 and C2A Alternatives would have a moderate impact at one location; and the NHC LPA Alternatives would have a moderate impact at one location. These are noted in the sections below.

The assessment also evaluated ground-borne noise and vibration impacts, which can be created by transit systems. "Ground-borne vibration" is the transmission of energy through the earth and, if strong enough to be perceptible, is sensed as motion of the floors or walls inside a building. The low-pitched, rumbling noise that can result from ground-borne vibration is called "ground-borne noise" and can only occur inside a building. Based on the analysis, the Light Rail Alternatives, across all alignment alternatives, would result in vibration impacts to 13 residential areas and ground-borne noise impacts to 19 residential areas with a relatively even distribution across alignment alternatives.

5.2.1 Potential Impacts to UNC Campus

Access and Mobility

Right-of-way would be required for the Light Rail Alternatives, as well as for the UNC Hospitals and Mason Farm Road Stations. The majority of the needed right-of-way is owned by UNC. Triangle Transit has worked with UNC administrators to design the proposed alignment. Road realignments and the Light Rail Alternatives would directly impact nine buildings in the UNC Odum Village residential area; however, these buildings were already slated to be demolished as a separate UNC project, according to the *UNC Campus Master Plan* (UNC 2007).

There would be changes to traffic patterns in the vicinity of the proposed UNC Hospitals Station and Mason Farm Road Station. Some of these changes are planned to occur under any alternative, including the No-Build Alternative.

At-grade crossings at Mason Farm Road, East Drive, the parking lot for the Kenan-Flagler Business School, and Baity Hill Drive would result in minor changes to access to parking decks near Baity Hill Drive apartments. Travel on Hibbard Drive, Branson Street, Manning Drive, Carmichael Street, and Fordham Boulevard would not be affected, as the Light Rail Alternatives are proposed to be elevated above these facilities.

Community Cohesion

The Light Rail Alternatives would not introduce a barrier that would affect community cohesion in this area, as much of the area is part of the UNC campus and planned for re-development based around the Light Rail Alternatives.



Community Resources

There are numerous community resources associated with UNC and UNC Hospitals, many of which would benefit from improved access for employees, students, patients, and visitors provided by the Light Rail Alternatives. There would be changes to traffic patterns in the vicinity of the UNC Hospitals. Impacts to parking would include loss of some surface lot parking at the Kenan-Flagler Business School lot. At-grade crossings at Mason Farm Road, East Drive, the parking lot for the Kenan-Flagler Business School, and Baity Hill Drive would result in minor changes to access to parking decks near UNC Hospitals. There would be a minor change in access to Aldersgate United Methodist Church due to the relocation of Fern Lane near Laurel Hill Road.

Residential property displacements

Right-of-way would be required for the Light Rail Alternatives, as well as stations at UNC Hospitals and Mason Farm Road. However, the majority of the needed right-of-way is owned by UNC. The project team has worked with University administrators to design an alignment that is acceptable to the University. Road realignments and the Light Rail Alternatives would directly impact several buildings in the UNC Odum Village residential area; however, these buildings are slated to be demolished according to the UNC Campus Master Plan. There would be no relocation or displacement of any private residences or businesses in this area.

Visual Quality

Visual changes in this area would include addition of light rail trackway and light rail vehicles, the overhead contact system, new stations (UNC Hospitals Station and Mason Farm Road Station), intersection modifications, pedestrian facilities, including a pedestrian bridge at the UNC Hospital Station, and retaining walls and bridges where the Light Rail Alternatives transition between at-grade and aerial structures. The light rail infrastructure would result in some removal of vegetated buffers between different campus land uses and would be visible from several surrounding areas, including Odum Village, Kenan-Flagler Business School, Mason Farm Road apartments, and Baity Hill Apartments. The area is largely urban and developed, and the light rail system would not be out of character for the area.

Noise & Vibration

The Light Rail Alternatives would have moderate to severe impacts in the Odum Village residential area resulting from the light rail trains and from light rail bells.

5.2.2 Potential Impacts to East Chapel Hill

Access and Mobility

East of Manning Drive, the Light Rail Alternatives would be within or adjacent to NCDOT right-of-way along Fordham Boulevard/NC 54 before turning to pass between the Highland Woods subdivision and Glenwood Elementary School on property owned by UNC. The proposed Hamilton Road Station is proposed as a walk-up station and would not be expected to affect traffic patterns in this area. The newer and dense East 54 development would benefit from the Hamilton Road Station as pedestrians could walk from the station to the businesses, restaurants, and condominiums in the area.



C1 Alternative

The proposed Meadowmont Lane Station associated with the C1 Alternative would improve access mobility to and from neighborhood residences and businesses. The alignment would cross several roads within the Meadowmont neighborhood at-grade, including Meadowmont Village Circle, Village Crossing, Barbee Chapel Road, and Sprunt Street. The alignment would also cross Meadowmont Lane just south of Green Cedar Lane and pass north of the The Cedars, an assisted living facility, along Green Cedar Lane.

C1A Alternative

The C1A Alternative would follow the same alignment as C1 through the Meadowmont community, providing the same improved access and potential impacts before turning north to parallel Park Bluff Drive, with an at-grade crossing to provide access to several residences along Iron Mountain Road east of Park Bluff Drive.

C2 Alternative

Like the C1 and C1A Alternatives, the C2 Alternative would remain along the northern edge of Finley Golf Course, then cross the access road to the Exchange at Meadowmont, Friday Center Drive, East Barbee Chapel Road, and Stencil Drive. All of these at-grade crossings would be gate controlled, requiring persons traveling to/from the Friday Center, UNC facilities, or the neighborhoods south of NC 54 to cross light rail tracks. The alignment would turn just south of NC 54 within existing NCDOT right-of-way before crossing over NC 54 on an aerial structure, remaining on the structure as it crosses Little Creek before returning to grade in the George King Road right-of-way. Access to the United States Army Corps of Engineers (USACE) waterfowl impoundment would be maintained or reconstructed and the roadway network is proposed to be modified to continue to provide access to properties in the area.

C2A Alternative

The C2A Alternative would cross Finley Golf Course Road at-grade and turn north to parallel NC 54, with minor impacts to parking at the Exchange. This alignment would lie within existing NCDOT right-of-way. Several at-grade crossings would be gate controlled, including the entrance road to the Exchange at Meadowmont, Friday Center Drive, and East Barbee Chapel Road, where the alignment would then rejoin the C2 Alternative. The pedestrian trail on the south side of NC 54 would be relocated slightly south of its current location and maintained. An existing pedestrian tunnel under NC 54 would be extended under the light rail tracks, and the primary east-west and north-south pedestrian routes in the area would be maintained.

Community Cohesion

For the most part, the Light Rail Alternatives would not introduce a barrier that would cause impacts to community cohesion in this area, as the proposed alignments are primarily located along existing transportation corridors or the edge of large parklands. However, in the Light Rail Alternatives would be directly behind Glenwood Elementary School and would form a barrier between the school and neighborhoods to the south, including Highland Woods.



C1 Alternative

A future transit corridor was preserved through Meadowmont when the community was planned and constructed. However, some community residents have expressed opposition to this alternative, stating that they believe the proposed alignment would create a perceived barrier through the community. In particular, residents have expressed concerns about dividing The Cedars retirement community from the rest of Meadowmont, although there would be at-grade crossings of the light rail track at Meadowmont Lane and Green Cedars Lane. Through the more developed portions of the Meadowmont community it is not anticipated that community cohesion would be adversely affected. However, in the vicinity of Iron Mountain Road the loss of two single-family homes would result in an adverse effect on community cohesion. Iron Mountain Road is a small cul-de-sac in the northeastern portion of Meadowmont that is somewhat separated from the larger Meadowmont community. There are currently four single-family homes on Iron Mountain Road, and these residents consider themselves a community.

C1A Alternative

The C1A Alternative would have similar impacts as the C1 Alternative through the Meadowmont community and would also have an at-grade crossing along Iron Mountain Road. Similar to the C1 Alternative, some residents have expressed concern over the potential impacts to their neighborhood and a perception that the at-grade alignment would be a barrier between portions of the community and the larger Meadowmont community, including the Cedars and homes along Iron Mountain Road. Through the more developed portions of the Meadowmont community it is not anticipated that community cohesion would be adversely affected. However, in the vicinity of Iron Mountain Road the loss of a single-family home would result in an adverse effect on cohesion of the cul-de-sac community.

C2 Alternative

The C2 Alternative would be located along or adjacent to natural divides in neighborhoods (e.g., between a hotel and multi-family housing accessed from different streets, within NC 54 right-of-way, adjacent to USACE property). As a result, it would not affect community cohesion.

C2A Alternative

The C2A Alternative, similar to the C2 Alternative, would be located along or adjacent to natural divides in neighborhoods (e.g., within NC 54 right-of-way, adjacent to USACE property). As a result, it would not affect community cohesion.

Community Resources

The Light Rail Alternatives would directly affect Finley Golf Course, requiring right-of-way from the golf course and the removal of existing vegetation in some areas. Triangle Transit has coordinated with golf course management to identify potential impacts and will continue to work with the golf course designer to minimize and mitigate impacts.

The Light Rail Alternatives would be directly behind Glenwood Elementary School and would form a barrier between the school and neighborhoods to the south, including The Highlands. The wooded area behind the school is used for educational purposes by several classes at the school. Unpaved trails (former golf cart paths) in this wooded area are also used by children walking to school from nearby



subdivisions, as well as by local running groups including UNC's cross-country team. Protective fencing would be placed along the alignment to ensure the safety of the schoolchildren, but would also eliminate access to the wooded area as an outdoor classroom.

The proposed alignment would pass Chapel Hill Fire Station #2, which is located at the northwest corner of Prestwick Road and Hamilton Road (with primary access on Hamilton Road); however, the Light Rail Alternatives is not likely to impede traffic in this area as the alignment would be located on the south side of Prestwick Road, and is not anticipated to affect response times from this station.

Roads would be realigned and/or portions of existing surface parking lots would be removed at Aldersgate United Methodist Church and St. Thomas More Church/School, the Exchange at Meadowmont, and the Friday Center for Continuing Education. The C1 and C1A Alternatives would be visible to visitors at the recreation center as well as those attending meetings at the Rizzo conference center or DuBose House.

C1 and C1A Alternatives

The C1 and C1A Alternatives would not directly affect any community resources. UNC's Friday Center and the numerous community resources within the Meadowmont community would benefit from improved access that would be provided by the C1 Alternative.

C2 Alternative

The C2 Alternative would not adversely affect any community resources. UNC's Friday Center would benefit from improved access provided by the C2 Alternative. However, community resources in the Meadowmont community would not be as accessible under this alternative compared to the C1 and C1A Alternatives due to the greater walk distance from the proposed station.

C2A Alternative

The C2A Alternative would not adversely affect any community resources. UNC's Friday Center would benefit from improved access provided by the C2A Alternative. Access to community resources in the Meadowmont community would be improved over the C2 Alternative, but not as much as the C1 and C1A Alternatives.

Residential property displacements

The C1 Alternative would displace two single-family residences: one residence due to ROW needs, the second residence because of the predicted vibration/ground borne noise impacts and aesthetic issue. The C1A Alternative would displace one single-family residence at Iron Mountain Rd/Park Bluff Drive due to ROW needs. The C2 Alternative would displace one single-family residence on Pearl Lane (east of Barbee Chapel Road) and one single-family residence on George King Road. The C2A Alternative would also displace the same single-family residence on George King Road as the C2 Alternative.

Visual Quality

Residents of the East 54 condominium complex have expressed concern regarding the changes to the visual environment. Visual changes would include new stations (Hamilton Road Station, Friday Center



Station, and Woodmont or Meadowmont Station), bridges, and retaining walls. Existing vegetation would be removed in various locations.

C1 Alternative

The C1 Alternative would be visible to those entering Meadowmont, including residents, visitors, and shoppers. The C1 Alternative would be visible crossing the Upper Little Creek Waterfowl Impoundment. Residents and hunters would be affected by visual changes.

C1A Alternative

The C1A Alternative would be visible in Meadowmont, from the DuBose House, Rizzo Conference Center, and Upper Little Creek Waterfowl Impoundment, and the visual changes would affect residents and hunters.

C2 and C2A Alternatives

Single-family residences along George King Road would be affected by visual changes caused by the introduction of new infrastructure that would be introduced, as described above.

Noise & Vibration

Residents of the East 54 condominium complex have expressed concern regarding potential noise impact. Noise impacts would occur along Iron Mountain Road, as described below.

C1 Alternative

The C1 Alternative would have a severe impact on noise along Iron Mountain Road. The C1 Alternative would also have vibration and ground-borne noise impacts along Cedar Berry Lane and Iron Mountain Road in the Meadowmont community.

C1A Alternative

The C1A Alternative would have a moderate impact on noise along Iron Mountain Road. The C1A Alternative would also have vibration and ground-borne noise impacts along Cedar Berry Lane and Iron Mountain Road in the Meadowmont community.

C2 Alternative

The C2 Alternative would have a moderate noise impact along George King Road caused by the light rail trains. The C2 Alternative would also have vibration and ground-borne noise impacts on Brookberry Circle (just east of UNC's Friday Center) and George King Road.

C2A Alternative

The C2 Alternative would have a moderate impact on noise, as well as vibration and ground-borne noise impacts, along George King Road caused by the light rail trains.



5.2.3 Potential Impacts to Leigh Village

Access and Mobility

The Light Rail Alternatives would cross Farrington Road, as well as other existing or planned streets, at-grade. Due to the lack of existing development in this area, no impact to access and mobility is anticipated.

Community Cohesion

Although the Light Rail Alternatives would cross a rural residential area with some scattered single-family homes and vacant lots, the area is not considered a cohesive neighborhood, and there would be no effects to community cohesion. Subdivisions in this area are primarily on the east side of I-40 and would not be affected by Light Rail Alternatives.

Community Resources

The Light Rail Alternatives would not directly affect any community resources in this area.

Residential property displacements

Several dispersed single-family residences would be displaced in this area by the Light Rail Alternatives and proposed stations. There would be four residential displacements near NC 54 and Celeste Circle. In addition, one single-family residence on Crescent Drive would be displaced for the proposed Leigh Village Station and park-and-ride lot. There would also be some acquisition of residential properties to accommodate the Light Rail Alternatives and proposed Gateway Station. Two residential properties would be displaced, near Old Chapel Hill Road and North White Oak Drive.

Visual Quality

Visual elements that would be introduced by the Light Rail Alternatives in this unit include light rail trackway and vehicles, overhead contact system, bridges, retaining walls, and stations (with platforms, canopies, lighting, and parking). The Light Rail Alternatives would pass dispersed residences near Crescent Drive, Pope Road, and White Oak Drive, and these residents would be substantially affected by the visual changes.

Noise & Vibration

The light rail bells and the park-and-ride lot for the proposed Gateway Station would result in a moderate noise impact near White Oak Drive.

5.2.4 Potential Impacts to US 15-501 Corridor

Access and Mobility

All the NHC Alternatives would pass through a primarily suburban retail area with a mix of office and multi-family residences. The area has a roadway network that provides multiple means of access to the same destinations. As a result, the introduction of the Light Rail Alternatives would not affect the accessibility and mobility of the areas. The Light Rail Alternatives would serve to connect these areas with larger customer, employee, and job bases.



NHC LPA Alternative

The NHC LPA Alternative would introduce at-grade crossings at Witherspoon Boulevard, McFarland Drive, and Southwest Durham Drive, but would not limit access to adjacent businesses and properties. Access to Southwest Durham Drive from Sayward Drive would be modified; however, access to all properties would be maintained. Traffic to residential properties on Sayward Drive would be redirected to the McFarland Drive extension, rather than Southwest Durham Drive.

After crossing New Hope Creek on an elevated structure, the alignment would return to grade and cross Garrett Road with no effect on mobility or access to properties in close proximity of the alignment. The alignment would then continue as it follows the property line between Springfield Apartments and Mission University Pines Apartments and continue on University Drive. Travel patterns would be modified in and around these complexes as Larchmont Road (access to Alden Apartments and Westgate Condominiums) would be restricted to a right turn only at University Drive. To mitigate this impact, a new roadway connection would be constructed between Larchmont Road and Snow Crest Trail to provide access from Larchmont Road to the signalized intersection at Snow Crest Trail and University Drive. The proposed station would be located in the median of University Drive, providing improved transit access for local residents.

NHC 1 Alternative

The NHC 1 Alternative would introduce an at-grade crossing at Southwest Durham Drive but would not limit access to adjacent businesses and properties. The alignment would pass Colonial Grand Apartments to the north and continue within the US 15-501 right-of-way. The alignment would be elevated across Garrett Road with no changes in access; however, the Light Rail Alternatives would follow the existing service road (Lyckan Parkway) east of Garrett Road. The service road would be shifted to the south and access to businesses would be maintained. Beginning in the vicinity of Larchmont Road, the alignment would be elevated over Sandy Creek and Martin Luther King Jr. Parkway. Access to Larchmont Road, which provides access to Alden Apartments, would not be obstructed by the alignment. The alignment would return to grade at the proposed Martin Luther King Jr. Parkway Station location near the intersection with University Drive and would continue in the median of University Drive, as described in the NHC LPA.

NHC 2 Alternative

Effects to access and mobility of the NHC 2 Alternative would be the same as NHC 1 from Southwest Durham Drive to Garrett Road. However, at that point the NHC 2 Alternative alignment would cross business parcels toward the southeast (avoiding Lyckan Parkway) and continue on a new transportation right-of-way across Sandy Creek and an adjacent wooded area. This alternative would follow the property line between Springfield Apartments and Laurel Trace Apartments and continue along the NHC LPA alignment. Effects to travel patterns in and around these complexes, the Martin Luther King Jr. Parkway Station, and mobility enhancements would be the same as those described in the NHC LPA.

Community Cohesion

The area east and west of the NHC Alternatives is made up primarily of suburban-style retail centers with large surface parking lots, along with a mix of office and multi-family residential. There is little community cohesion in the area as developments are separated by large parking lots and other



transportation infrastructure. As a result, the Light Rail Alternatives would not affect community cohesion.

NHC LPA Alternative

The NHC LPA Alternative would cross through an isolated single-family community, adjacent to big box retail along Sayward Drive. Although this alternative would require the discontinuation of Sayward Drive, pedestrian connections would be maintained through that area to provide access to properties on both sides of the station. The alignment would then run adjacent to Colonial Grand Apartments, which is a cohesive community itself; however, Colonial Grand Apartments is isolated from the larger community by wooded areas and the nature of the complex's layout. As the alignment continues west, it would run south of the Oak Creek Village apartments. Like the Colonial Grand Apartments, Oak Creek Village has internal cohesion but is isolated from the larger community. The alignment would then run through the wooded area between Springfield Apartments and Mission University Pines Apartments, retaining the existing divide between the communities. As a result, the NHC LPA would not affect community cohesion.

NHC 1 Alternative

The NHC 1 Alternative would run adjacent to Colonial Grand Apartments to the north. The alignment would continue along the US 15-501 right-of-way, run across the northern border of the Oak Creek Village apartments, and would be visible from those apartments currently facing US 15-501. The alignment would eventually run along the north and eastern borders of Alexan Place apartments utilizing existing NCDOT right-of-way. As a result, the NHC 1 Alternative would not affect community cohesion.

NHC 2 Alternative

The effects of the NHC 2 Alternative on community cohesion would be the same as NHC 1 from Southwest Durham Drive to east of Garrett Road. The alignment would then cross business parcels toward the southeast (avoiding Lyckan Parkway) and be in a new transportation right-of-way across Sandy Creek and an adjacent wooded area. Effects on Springfield Apartments and Mission University Pines would be the same as those listed for the NHC LPA.

Community Resources

The NHC LPA Alternative would have a moderate noise impact at the New Hope Creek trails resulting from the light rail trains. No community resources would be directly affected by the Light Rail Alternatives east and west of the NHC alternatives. In addition, no community resources would be adversely affected by the NHC LPA, NHC 1 or NHC 2 Alternatives. Numerous community resources near Patterson Place Station, Martin Luther King Jr. Parkway Station, and South Square Station would benefit from improved access via the light rail.

Residential property displacements

The NHC LPA Alternative would result in two single-family residential displacements on Sayward Drive. The NHC 1 and NHC 2 Alternatives would displace three single-family residences, two on Sayward Drive and one on Southwest Durham Drive.



Visual Quality

Visual changes in this area would include the construction of new bridges and retaining walls, stations, park-and-ride lots, and lighting around the stations and park-and-ride lots. There would be several at-grade crossings, as well as some grade-separated crossings and areas where the light rail and stations are on structure. University Drive would be widened. Vegetation and landscaping would be removed in various areas. The three alternatives would have similar visual elements; however, their locations would result in visual impacts to different viewers and resources.

The segment from University Drive to Cornwallis Road is common to all Light Rail Alternatives. The introduction of the light rail in the median of University Drive, elevated trackway and station along Shannon Road, and behind residential areas near Pickett Road would affect residents and businesses in these areas.

NHC LPA Alternative

The NHC LPA would be visible from residences on Sayward Drive, the Colonial Grand Apartments, and New Hope Creek Bottomland Trail, and residents and trail users would be affected by the visual changes associated with the NHC LPA.

NHC 1 Alternative

NHC 1 would be visible from the Colonial Grand Apartments, Oak Creek Village Apartments, and businesses along Lyckan Parkway. The light rail would be elevated along US 15-501 east of Garrett Road, passing Oak Creek Apartments approximately two stories in the air. Residents and businesses would be affected by the visual changes.

NHC 2 Alternative

NHC 2 would be visible from residences on Sayward Drive and the Colonial Grand Apartments. East of Garrett Road, the NHC 2 Alternative would be on structure approximately 25 feet above grade and would be highly visible from businesses along US 15-501. Views of remaining businesses would be blocked to some extent by the light rail structure. Residents and businesses would be affected by the visual changes.

Noise & Vibration

The NHC 1 and NHC 2 Alternatives would not have noise impacts, but would have vibration and ground-borne noise impacts at the Colonial Grand Apartments. The NHC LPA and NHC 2 Alternatives would also have ground-borne noise impacts at the Mission University Pines Apartments.

5.2.5 Potential Impacts to Duke West Campus and Medical Center

Access and Mobility

The Light Rail Alternatives would enter Erwin Road at-grade at Cameron Boulevard. The Light Rail Alternatives would be located in the median of Erwin Road from Cameron Boulevard to the east of Trent Drive. There would be some restrictions on left turns along Erwin Road, but major turning movements would still be permitted; for additional information see the Roadways section of the *Durham-Orange Light Rail Transit Project DEIS*.



Right-of-way acquisition would be required from businesses along both sides of Erwin Road to accommodate Erwin Road travel lanes and the Light Rail Alternatives. This would require the reconfiguration of parking lots and access to some facilities along Erwin Road. However, access to these businesses would be maintained. Access to these facilities would be maintained, though some would be restricted to right turns only. Based on coordination with Duke University Medical Center, full access would be maintained at Emergency Drive.

Community Cohesion

The Light Rail Alternatives would not introduce a barrier to community cohesion in this area, as the proposed alternatives are primarily located along an existing transportation corridor. Rather, given the dense urban environment adjacent to Duke University and numerous medical facilities, introduction of the proposed LaSalle Street Station and either of the Duke/VA Medical Centers Station alternatives would increase pedestrian traffic. Due to the widening of Erwin Road proposed as part of the Project, care will need to be taken to ensure safe and convenient pedestrian access across the corridor.

Community Resources

The Light Rail Alternatives would require the demolition of Duke's John Hope Franklin Center, and Triangle Transit will work with Duke University to ensure that the services provided at that facility are relocated and maintained. In addition, access and parking at Duke University Hospital and the Durham VA Medical Center would be affected. Right-of-way acquisition would be required from institutional uses along both sides of Erwin Road to accommodate Erwin Road travel lanes and the Light Rail Alternatives. This would require the reconfiguration of parking lots and access to some facilities along Erwin Road, such as the Durham VA Medical Center and Duke University. However, access to these facilities would be maintained. In addition, the Light Rail Alternatives and stations would be visible to staff and patients at the Duke Hospital, Durham VA Medical Center, and other medical offices along Erwin Road.

Residential property displacements

There would be no residential displacements associated with the Light Rail Alternatives in this area.

Visual Quality

Visual changes in this unit would include introduction of light rail trackway and overhead contact system, light rail vehicles, retaining walls, removal of vegetation, elimination of some surface parking, and stations at LaSalle Street Station and at either Duke Eye Center or between Trent Drive and Flowers Drive, with associated infrastructure and lighting. Residents of apartments along Erwin Road would also have views of the Light Rail Alternatives and stations. The Light Rail Alternatives would generally be visually consistent with other visual elements along this corridor, including the roadway, overhead utility lines, and relatively modern, institutional structures.

Noise & Vibration

The Light Rail Alternatives would not have noise or vibration impacts in this area.



5.2.6 Potential Impacts to Old West Durham/Duke East Campus

Access and Mobility

The Light Rail Alternatives would exit the median of Erwin Road at-grade at Anderson Street before transitioning to an elevated structure located between Erwin Road and NC 147 and then crossing over NC 147. The proposed Ninth Street Station would be on an elevated platform, and the Light Rail Alternatives would continue on aerial structure across Erwin Road and follow the south side of West Pettigrew Street. The Light Rail Alternatives would be elevated over Swift Avenue before turning south away from Pettigrew Street on aerial structure on new transportation right-of-way across the entrance and parking for Hillcrest Convalescent Center, parking for Duke Center for Documentary Studies, Powe Street, and Campus Drive. West Pettigrew Street would remain open in its current location, and there would not be impacts to mobility in the area. There could be changes in access to individual properties.

Community Cohesion

The Ninth Street area and surrounding neighborhoods, including Old West Durham, Trinity Heights, and Trinity Park include a mix of owner- and renter-occupied housing, including large populations of Duke University students and staff. The area is already divided by the railroad tracks and NC 147, and most residential areas are concentrated north of these facilities. The Light Rail Alternatives would not introduce a barrier to community cohesion in this area, as the proposed alignment is primarily located along an existing transportation corridor with institutional and commercial uses.

Community Resources

Several community resources are located in this area, including medical services and facilities associated with Duke University. The proposed Ninth Street Station would be on an elevated platform, and the Light Rail Alternatives would travel on aerial structure across Erwin Road and follow the south side of West Pettigrew Street through parking areas associated with the Pettigrew Rehabilitation Center, West Pettigrew Dialysis, and E.K. Powe House. Access to Pettigrew Rehabilitation Center, West Pettigrew Dialysis, and E.K. Powe House would remain from Pettigrew Street, though cars would pass under the Light Rail Alternatives aerial structure, and parking areas for each would be reconfigured. Additionally, the Light Rail Alternatives would cross the existing entrance to Hillcrest Convalescent Center from West Pettigrew Street, as well as some parking areas associated with the facility. There would not be impacts to the facility's buildings.

Several Duke University facilities would also be affected, including the Center for Documentary Studies, Smith Warehouse, and transportation services housed in a building on Buchanan Avenue. The Light Rail Alternatives would affect parking associated with the Center for Documentary Studies and would have visual and vibration impacts on the facility. The Light Rail Alternatives would follow the property line between the Smith Warehouse parking lot and NC 147, and there would be no direct impacts to the Smith Warehouse. East of Buchanan Boulevard, warehouses used by Duke University transportation services would be demolished to make room for the Light Rail Alternatives and proposed Buchanan Station.

The proposed infrastructure associated with the Light Rail Alternatives and the Ninth Street Station would introduce new visual elements. They would be visible from the Pettigrew Rehabilitation Center, West Pettigrew Dialysis Center, medical offices in the E.K. Powe House, Hillcrest Convalescent Center,



Duke Center for Documentary Studies, and Smith Warehouse building. The Light Rail Alternatives would also result in vibration and ground-borne noise impacts at the Duke University Center for Documentary Studies.

Residential property displacements

There would be no residential displacements associated with the Light Rail Alternatives in this area.

Visual Quality

Visual changes from the Light Rail Alternatives would include introduction of light rail trackway and the overhead contact system, light rail vehicles, stations and associated improvements and lighting, retaining walls, and bridges. The Light Rail Alternatives and proposed Ninth Street Station would be visible from Erwin Square and Erwin Mill Apartments. From the north, an existing vegetated buffer would screen the Light Rail Alternatives from Main Street and Duke University East Campus; however, brief views would be possible between trees, particularly in the winter. Residents of the mixed-use developments and historic districts in the area and patients and visitors of medical facilities on Pettigrew Street would be affected.

Noise & Vibration

The Light Rail Alternatives would not have noise impacts in this area.

5.2.7 Potential Impacts to Downtown Durham

Access and Mobility

The Light Rail Alternatives would generally follow West Pettigrew Street through downtown Durham between East Chapel Hill Street and South Roxboro Street. West Pettigrew Street would become one-way (eastbound) through this area, with the Light Rail Alternatives located between the roadway travel lane and the existing railroad tracks. In the vicinity of the proposed Durham Station, Pettigrew Street would be reduced to one, eastbound lane between the Chapel Hill Street and Dillard Street. Buses would share the westbound track with the light rail trains through this section. There would be at-grade crossings at Gregson Street and Duke Street. The alignment would pass through existing intersections at Chapel Hill Street, Blackwell Street/South Corcoran Street, South Mangum Street, and South Roxboro Street.

Although this would be a change from the current traffic pattern, the area has a roadway network that provides multiple means of access to the same destinations. As a result, the introduction of the Light Rail Alternatives would not affect the accessibility of the area in general, although there would be fewer ingress and egress routes to certain facilities that are accessed from Pettigrew Street. The Light Rail Alternatives would serve to connect these areas with larger customer, employee, and job bases. In addition, pedestrian mobility in downtown Durham would be improved by the conversion of Pettigrew to one-way, as well as by pedestrian improvements associated with the roadway shift.

Community Cohesion

In the vicinity of the Light Rail Alternatives, residential uses are primarily multi-family, apartments, and condominiums, some in converted warehouse buildings. The Light Rail Alternatives would be located



within an existing transportation corridor through an area that is already divided by the railroad tracks and NC 147. The Light Rail Alternatives would not introduce a barrier to community cohesion in this area, as the proposed alignment is primarily located along an existing transportation corridor in an urban downtown setting. There would be no impacts to community cohesion.

Community Resources

Overall access to the numerous community resources in this area, including the Durham Performing Arts Center, American Tobacco Campus, Durham Bulls Athletic Park, and government services, would be improved by enhanced access to transit. The location of the proposed Durham Station adjacent to the existing Durham Transportation Center and Amtrak Station would greatly benefit transit users by allowing for transfers between services for local and regional transit trips. However, there would be some visual effects by the Light Rail Alternatives. The Light Rail Alternatives and stations would be visible from the Durham Transportation Center, Amtrak Station, American Tobacco Campus, Durham Performing Arts Center, government buildings, and apartments.

Residential property displacements

There would be no residential displacements associated with the Light Rail Alternatives in this area.

Visual Quality

Visual changes from the Light Rail Alternatives would include introduction of light rail trackway and the overhead contact system, light rail vehicles, stations and associated pedestrian accommodations and lighting. Viewers in the area would have views of a transportation corridor that includes the Pettigrew Street roadway travel lanes, light rail trackway and overhead contact system, and existing railroad tracks. The additional light rail infrastructure would not impede views and would be consistent with the existing transportation and utility infrastructure in the corridor.

Noise & Vibration

The Light Rail Alternatives would not have noise impacts in this area, but there would be vibration and ground-borne noise impacts to the Apartments at American Tobacco in the Old Bull Building at the intersection of Pettigrew Street and Blackwell Street.

5.2.8 Potential Impacts to East Durham

Access and Mobility

East of South Roxboro Street, the Light Rail Alternatives would continue to follow Pettigrew Street to the proposed Alston Avenue Station, located west of Alston Avenue. Pettigrew Street would have one-way (eastbound) automobile traffic between South Roxboro Street and Dillard Street, but east of Dillard Street, Pettigrew Street would continue to have two-way traffic. The Light Rail Alternatives would be located between the roadway travel lane(s) and the existing railroad tracks. Pettigrew Street would be shifted slightly to the south to allow for two-way traffic in addition to the Light Rail Alternatives. Maintaining two-way traffic on this section of Pettigrew is important, as there are limited other local east-west options due to NC 147 (a controlled-access freeway) and the railroad tracks.



In general, the Light Rail Alternatives would improve connectivity between this area, which includes several Northeast Central Durham neighborhoods, and other areas of Durham and improve access to large employers and retail areas.

Community Cohesion

Neighborhoods in this area have been previously separated by the railroad tracks and then by the construction of NC 147. There are a few individual residences in the area where the Light Rail Alternatives would pass between Colfax Street and Murphy Street. Several of these houses would be displaced to make room for a multi-story parking structure associated with the proposed Alston Avenue Station. The impacts of the Light Rail Alternatives would be primarily within an existing transportation corridor, and the impacts to the residences in the area would not constitute an impact to community cohesion.

Community Resources

The property that includes the John Avery Boys and Girls Club, at the corner of Grant Street and Pettigrew Street, would be affected when Pettigrew Street is shifted to accommodate the Light Rail alternatives; however, there would be no impacts to buildings. There would be enhanced access to the Boys and Girls Club due to proximity to the proposed Alston Avenue Station and from associated road and pedestrian improvements around the station, including improvements of Grant Street and Pettigrew Street, by introducing a marked crosswalk. The existing fence along the playground and field will either be maintained or replaced. Based on the fencing and improved sidewalk, it is not anticipated that the Light Rail Alternatives would introduce a safety concern.

Residential property displacements

The Light Rail Alternatives would result in eight residential displacements. There is a collection of homes in the area where the Light Rail Alternatives pass between Grant Street and Chatham Place, and some of these houses would be displaced to accommodate the relocation of Pettigrew Street and a multi-story parking structure associated with the proposed Alston Avenue Station.

Visual Quality

Visual changes would include light rail infrastructure and new stations. The stations would have canopies, pedestrian accommodations, lighting, and parking, including a large surface parking lot at Dillard Street and a multi-story parking structure at Alston Avenue. This area includes a mix of land uses and visual elements, and the addition of the Light Rail Alternatives to the existing transportation corridor along Pettigrew Street would be consistent with planned conditions in this area.

Noise & Vibration

The Light Rail Alternatives would not have noise or vibration impacts in this area.

5.3 Rail Operations and Maintenance Facility

ROMF alternatives are an essential part of a light rail project. The ROMF is the location where light rail vehicles would be stored, cleaned, and maintained. The ROMF is also where the majority of the people who would be employed on the proposed D-O LRT Project would work.

There would be no noise impacts associated with any of the ROMFs.

5.3.1 Leigh Village ROMF

The Leigh Village ROMF Alternative would be located between Farrington Road and I-40 near the intersection of Ephesus Church Road and Farrington Road. The proposed site is a large lot located in a predominately suburban/rural area. The introduction of a ROMF would remove a local landmark, Patterson's Mill Country Store, and five single-family homes, and would be uncharacteristic of current development in the area. The area surrounding the ROMF site is largely wooded, and the ROMF would likely have limited visibility from other nearby residential areas.

5.3.2 Farrington Road ROMF

The Farrington Road ROMF Alternative would be located west of I-40, just south of where Farrington Road crosses over I-40. The proposed site is located in a predominately large lot suburban/rural area. The introduction of a ROMF would remove six single-family homes and replace them with a ROMF, which would be uncharacteristic of current development in the area. The facility would not cause changes in access and mobility or community cohesion in this area. Similar to the Leigh Village ROMF, the Farrington Road ROMF would require the acquisition of a portion of the parcel that contains Patterson's Mill Country Store. However, this is not the portion of the parcel where the store is located. As a result, the store could remain with modifications to its access. The area surrounding the ROMF site is largely wooded, and the ROMF would likely have limited visibility from other nearby residential areas.

5.3.3 Patterson Place ROMF

The Patterson Place ROMF Alternative would be located in an existing wooded area between US 15-501 and Colonial Grand Apartments east of Southwest Durham Drive. The NHC LPA Alternative would pass on the opposite side of the apartment complex, which means that the selection of this site would surround the complex with light rail infrastructure. Although the apartment complex is a cohesive community; it is isolated from the larger community by wooded area and its layout. The Patterson Place ROMF site is currently undeveloped; however, a development proposal was submitted to the City of Durham in October 2014 for this location. The Patterson Place ROMF Alternative may have an impact on the community cohesion with the apartment complex. It cannot be selected as the preferred ROMF site if NHC 1 or NHC 2 Alternatives are chosen, as those alignments would pass through the site and divide it such that a feasible yard and building layout could not be constructed.

5.3.4 Cornwallis Road ROMF

The Cornwallis Road ROMF Alternative would be located east of US 15-501 and south of Cornwallis Road. The site is currently developed as an industrial site and contains a former Pepsi plant. The proposed site is immediately adjacent to the Levin Jewish Community Center campus. Access to and use of the Community Center may be affected. It is also likely that light poles and, at night, lights from the site would be visible from the Community Center. The Levin Jewish Community Center campus is a cohesive community, with extensive outdoor facilities including a swimming pool, track, and playground. The use of the facilities and community cohesion may be affected by the presence of the Cornwallis Road ROMF. During public involvement, many people who use the community center expressed their concern that the ROMF may negatively affect community cohesion at the center. Protective fencing



would be placed between the ROMF and Community Center to ensure the safety of children on the Community Center campus.

5.3.5 Alston Avenue ROMF

The Alston Avenue ROMF Alternative would be located east of the proposed Alston Avenue Station near Briggs Avenue, between Pettigrew Street and NC 147. The site is currently an industrial area and includes buildings and paved parking areas. The site is regularly accessed by large trucks and has rail access. Use of this site would replace current industrial functions with the ROMF that would have similar demands on the surrounding infrastructure, so all access points may not be needed for future use. The relocation of several of the existing businesses including Brenntag and Eastern Carolina Organics and the resulting loss in employment (150 to 250 jobs) would have an impact on community cohesion in the area as those workers may frequent local businesses and many are residents of the surrounding area. East Durham residents voiced concern that a relocation of Brenntag and the other businesses on the proposed site could be devastating to what they perceive as an industrial hub in East Durham. Furthermore, their concern is that if these businesses leave the area, it would be more difficult to attract new industrial businesses because there would be a smaller existing base. There would also be two residential displacements associated with this ROMF Alternative.



6. Mitigation

6.1 No-Build Alternative

Under the No-Build Alternative, there would be no impacts to neighborhoods or community cohesion due to the proposed D-O LRT Project. As such, project-related mitigation would not be warranted.

The No-Build Alternative includes other transportation projects that are presumed to be constructed – even if the proposed D-O LRT Project is not built. The sponsor(s) of those projects will perform environmental studies to establish mitigation requirements as required by law.

6.2 Light Rail Alternatives

Environmental mitigation measures identified in the *Durham-Orange Light Rail Transit Project DEIS* would address impacts from the light rail alternatives that may affect neighborhoods and community resources; a summary of mitigation measures is provided below. For further information, refer to the technical reports provided for each resource. Triangle Transit will continue to coordinate with affected residents, businesses, and community facilities to identify strategies to minimize the effects of the study area mitigation.

- Prior to construction, coordination with Chapel Hill-Carrboro City Schools and Durham Public Schools would be implemented to identify potential impacts on school bus routes and appropriate temporary detour routes during construction.
- Mitigation for impacts to the Finley Golf Course would include reconstructing affected holes and providing landscaping based on a plan developed by the golf course designer.
- For potential impacts to the Glenwood Elementary School, protective fencing would be placed along the proposed alignment to ensure the safety of the schoolchildren.
- Impacts to the Patterson's Mills County Store and surrounding residential development from the NEPA Preferred Alternative and Farrington Road ROMF would be mitigated through landscaping and vegetative screening.
- To mitigate the impact of restricting Larchmont Road to a right turn only at University Drive, a new roadway connection would be constructed between Larchmont Road and Snow Crest Trail to provide access from Larchmont Road to the signalized intersection at Snow Crest Trail and University Drive.
- If the Cornwallis Road ROMF Alternative is selected, protective fencing would be placed between the ROMF and Levin Jewish Community Center to ensure the safety of children on the Community Center campus.
- Due to the widening of Erwin Road proposed as part of the Project, care will need to be taken to ensure safe and convenient pedestrian access across the corridor.
- Mitigation for impacts to the John Hope Franklin Center would include working with Duke University to ensure that the services provided at that facility are maintained.
- For potential impacts to the John Avery Boys and Girls Club, the existing fence would either be maintained or replaced along the field and playground.



- Mitigation for land acquisitions of privately-owned properties and businesses would be addressed in compliance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (49 CFR Part 24). See the Acquisitions, Relocations, and Displacements chapter in the *Durham-Orange Light Rail Transit Project DEIS* for more information.
- Triangle Transit would use an interdisciplinary design team to create aesthetic guidelines and standards in the design of project elements. Visual effects would also be mitigated by integrating light rail facilities with area development plans, as well as other measures outlined in the *Visual and Aesthetic Technical Report*.
- Mitigation measures for potential noise effects would generally fall into three categories: (1) treatments that reduce noise levels at the source, in the form of noise reducing wheel and vehicle specifications, (2) operational changes that reduce the frequency of trains per hour or reduce train speed, (3) measures that would place a barrier between the source and the receptor), and (4) treatments that reduce noise levels at the receiver (e.g., sound barriers and improved building insulation). See the *Noise and Vibration Technical Report* for more information.



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