

# Erwin Road Compact Neighborhood

## Introduction

This section will describe in greater detail the proposed changes to the Future Land Use Map for the area around the proposed LaSalle Street and Medical Center light rail stations. Opportunities, challenges and potential impacts of the proposed Compact Neighborhood Tier will be evaluated.

## Existing Land Use and Development

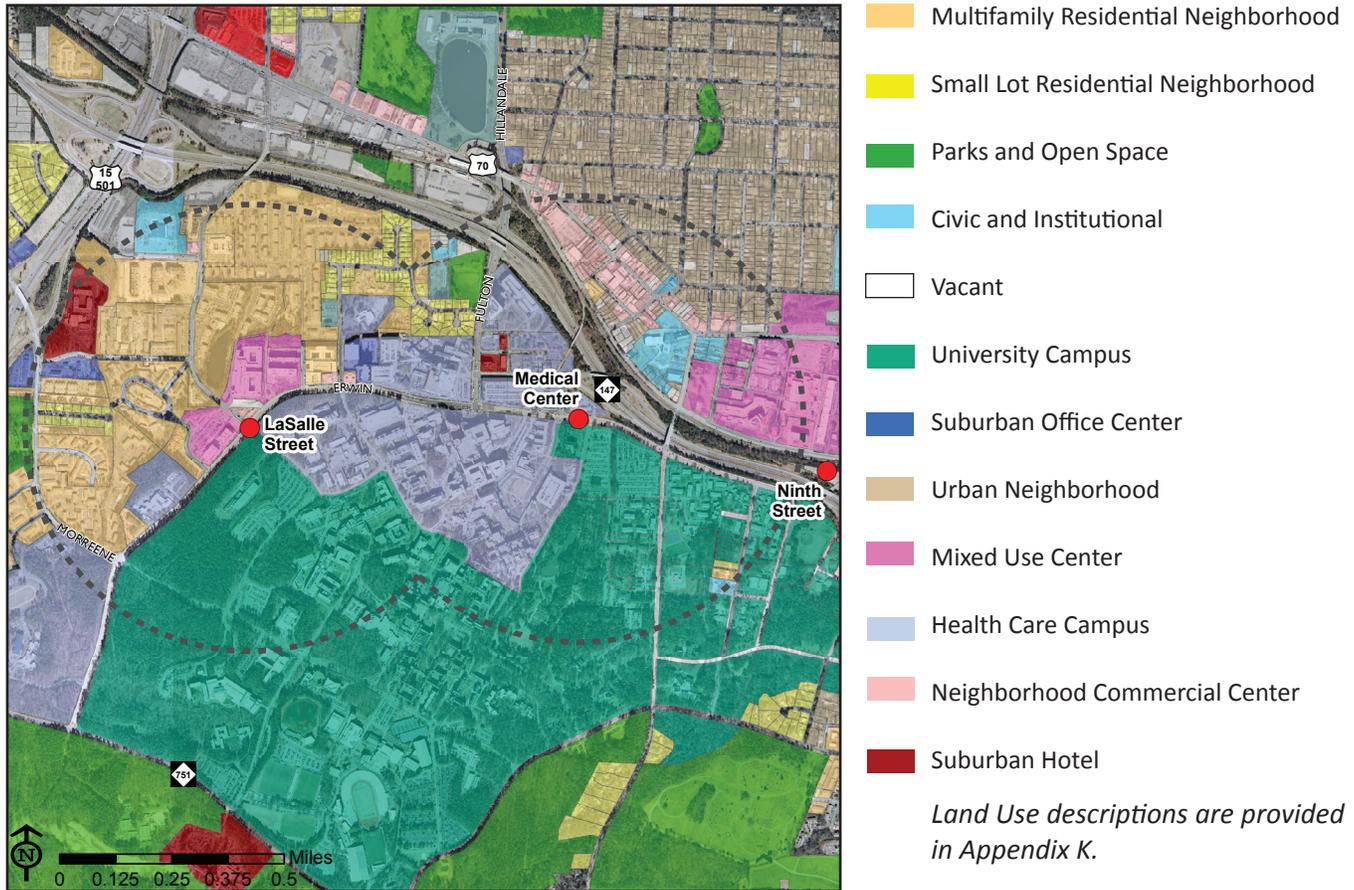
At the door step of the Duke University Medical Center and the Veterans Affairs (VA) Medical Center, the area along Erwin Road has developed in a dense, mixed use pattern. While the main university and hospital campuses are largely contained south of Erwin Road, the north side has developed as a blend of office buildings, mixed use projects and the health care centers, including the VA Medical Center. Further north are large multi-family apartment complexes, mostly built between the 1970s and 2000s. A pocket of single-family houses, known as the Crest Street neighborhood, is surrounded by more intense land uses. A map and description of existing land uses and development can be found in Figure 1.

## Proposed Changes to the Future Land Use Map

The Future Land Use Map currently designates an area centered around the Duke and Veterans Affairs medical centers as a 475-acre Compact Neighborhood Tier. This original boundary made sense in 2005; however, with changes to the development character of Erwin Road and a new LRT station introduced at LaSalle Street, boundaries for the Compact Neighborhood Tier ought to be reconsidered.

Staff recommends four-part amendments to the Future Land Use Map: Development Tier, Future Land Use Designations, Duke University, and Technical Updates. Each is explained in greater detail on the following pages.

Figure 1: Existing Land Use and Development Map

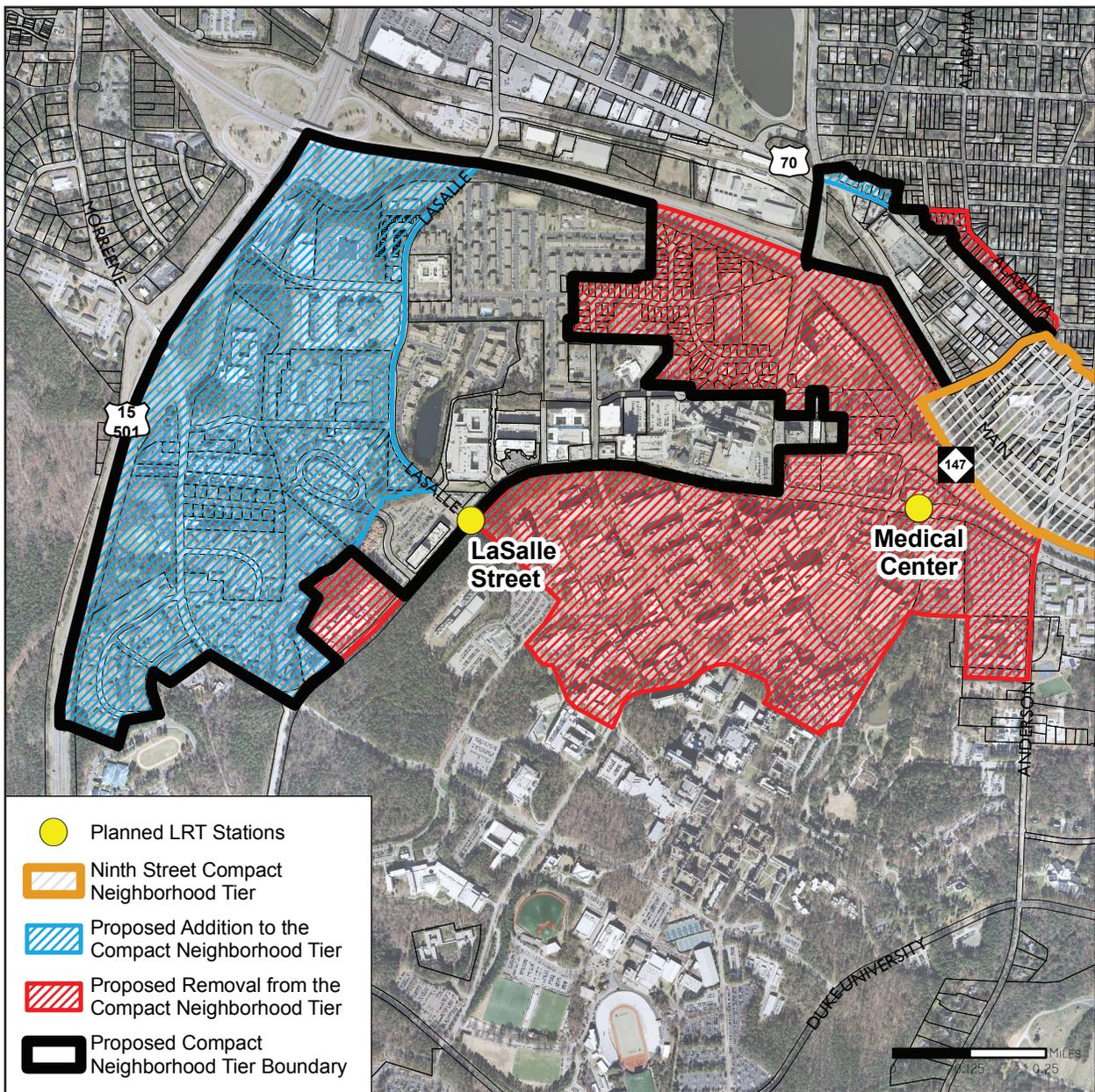


Land Use Type	Acres	Percent of Half Mile Area
University Campus	274	28%
Health Care Campus	173	18%
Multi-Family Residential Neighborhood	168	17%
Right of Way	159	16%
Mixed Use Center	50	5%
Urban Neighborhood	28	3%
Neighborhood Commercial Center	24	2%
Small Lot Residential Neighborhood	23	2%
Civic	19	2%
Suburban Hotel	12	1%
Vacant	9	1%
Suburban Office Center	8	1%
Parks and Open Space	7	1%
Light Industrial Center	6	1%
Utility	4	0%
<b>Total</b>	<b>964</b>	<b>100%</b>

**Proposed Change: Development Tier**

Update the Compact Neighborhood Tier with boundaries developed with community input. As shown in Figure 2, an approximately 48-acre area west of Fulton Street and north of Erwin Road is recommended to be removed from the Compact Neighborhood Tier. This area is Crest Street, a predominantly single-family neighborhood with an important history. All properties zoned University College on either side of Erwin Road are also proposed to be removed from the Compact Neighborhood Tier, as well as a small block of single family homes on Alabama Avenue. A 220-acre area west of LaSalle, east of US 15-501 and south of NC 147 is recommended to be included. The changes result in a Compact Neighborhood Tier of approximately 412 acres.

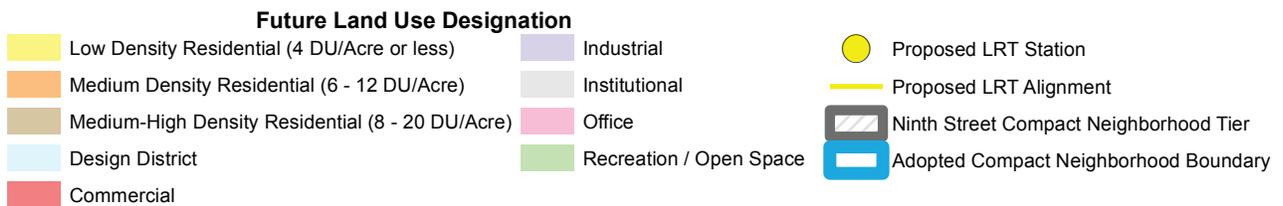
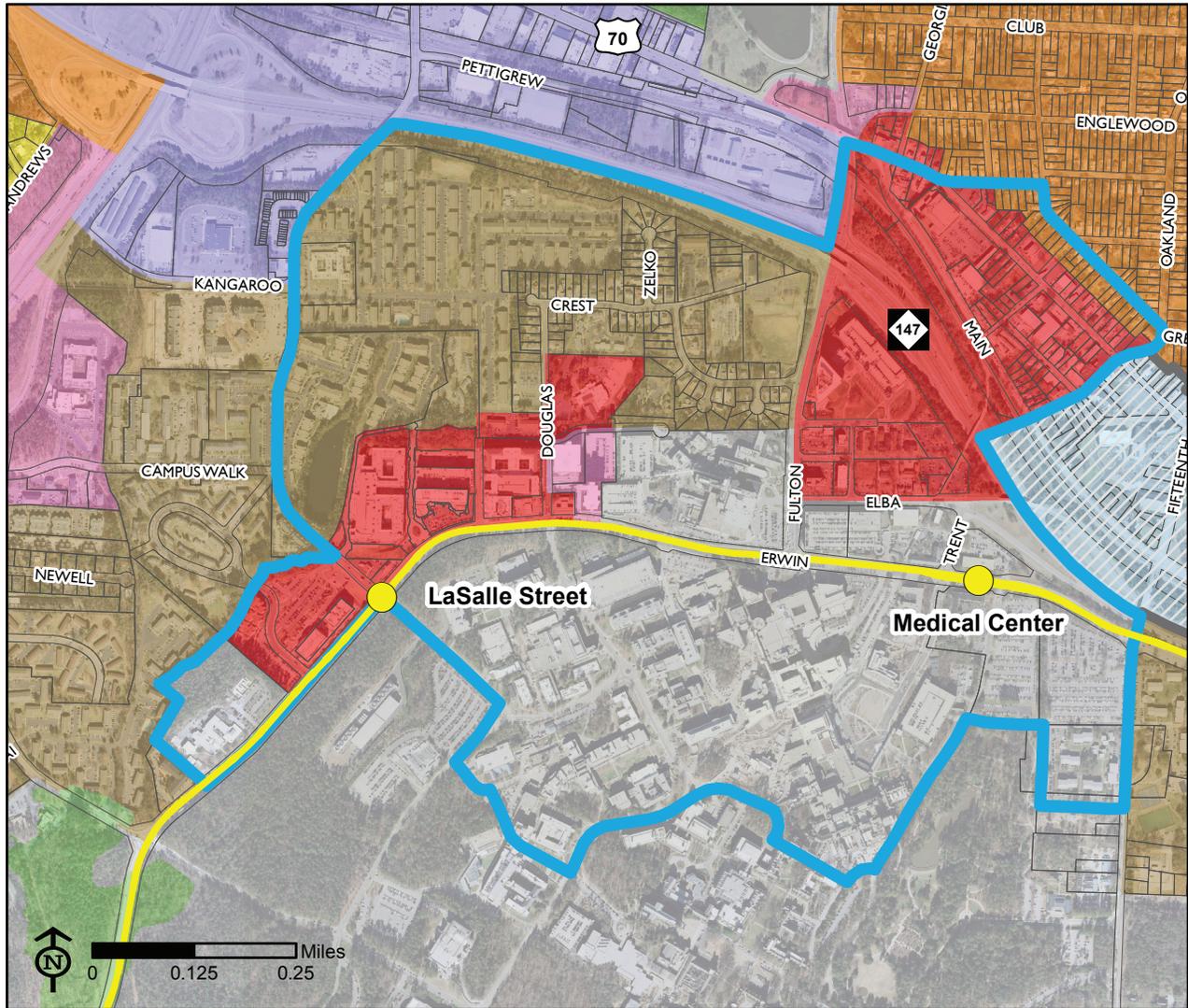
**Figure 2: Proposed Development Tier Changes**



**Proposed Change: Future Land Use Designations**

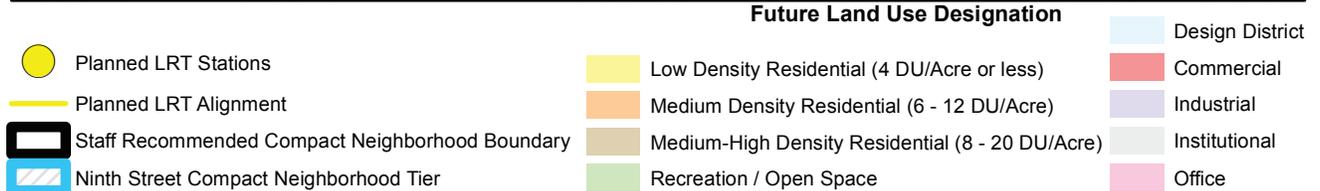
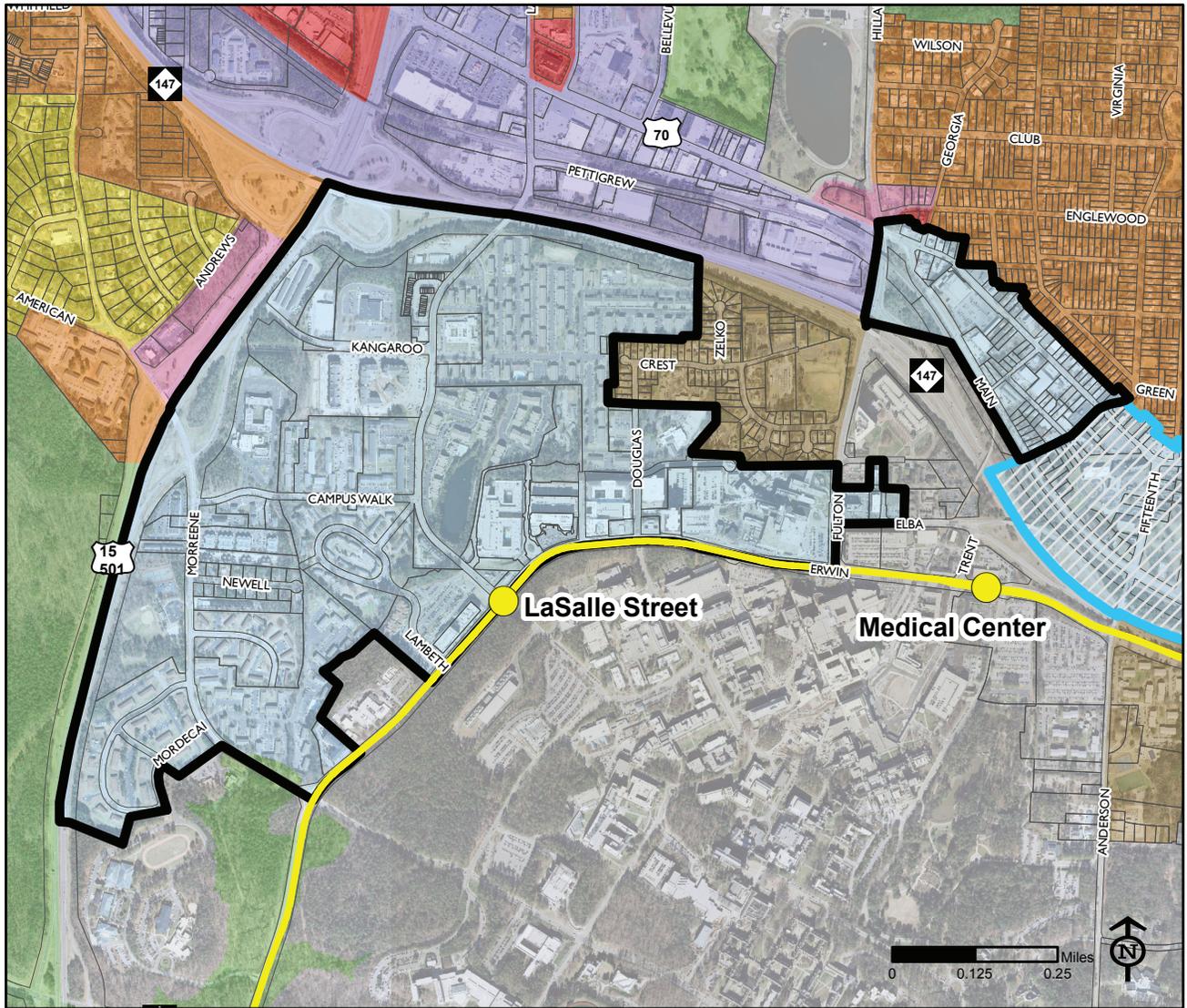
Amend the future land use designations shown in Figures 3 and 4 to Design District. This is the category on the future land use map that directs future zoning map changes to the Compact Design (CD) zoning district, a form-based district which encourages a mix of uses and emphasizes pedestrian-oriented design.

**Figure 3: Current Future Land Use Map**



This proposal would convert 86 acres of Commercial, 38 acres of Industrial, 23 acres of Institutional, 226 acres of Medium-High Density Residential, and 38 acres of Office to Design District.

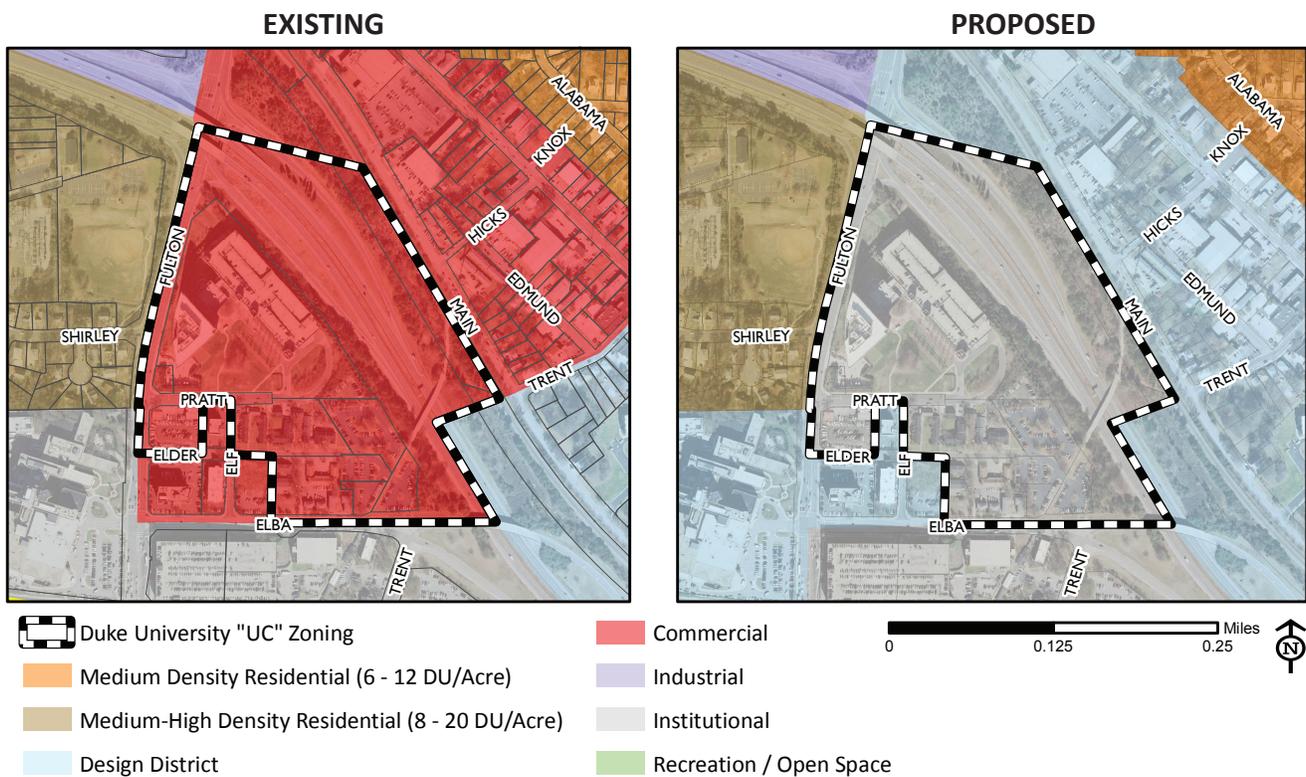
Figure 4: Proposed Future Land Use Map



**Proposed Change: Duke University** Amend the future land use designation shown in Figure 5 from Commercial to Institutional. The intent for this area, according to Duke University Master Plans is to expand the Medical Center campus at densities and intensities that are transit supportive. These properties are owned by Duke University and are zoned University-College (UC). The University-College zoning designation allows Duke University and the Medical Center to plan at a campus-

wide level for things like parking, sidewalks and stormwater management. According to Facilities Management staff with the University and Medical Center, they are opposed to amending their zoning district to Compact Design; and therefore, the Future Land Use Designation to Design District. This proposed change to Institutional would make the Future Land Land Use Map consistent with the existing zoning.

Figure 5: Duke University University College Land Use Map Changes



**Proposed Change: Technical Updates**

Correct minor mapping errors that will result in small (approximately 1 acre or less) changes to the Future Land Use Map, mostly impacting the Right-of-Way.

**West Durham**

Removing Duke University from the Compact Neighborhood Tier results in an area north of the Durham Freeway centered along Main Street and Hillsborough Street that is more closely associated with the Ninth Street Compact Neighborhood than the proposed Erwin Road Compact Neighborhood. Figures 6 and 7 show the area in relationship to the Ninth Street Compact Neighborhood Tier and planned LRT station. The proposed (but on-hold) West Durham Commuter Rail Station would be located along the freight rail tracks, across from the existing Food Lion. This area of West Durham has been designated as a Compact Neighborhood Tier since the 2005 Comprehensive Plan, and staff feels it is still appropriately designated because of the proximity to future transit and potential for infill and redevelopment. On the northern edge, the boundary is drawn mid-block so that properties facing Hillsborough are included, but those fronting on Alabama Avenue are not.

**Figure 6: Current Future Land Use Map**

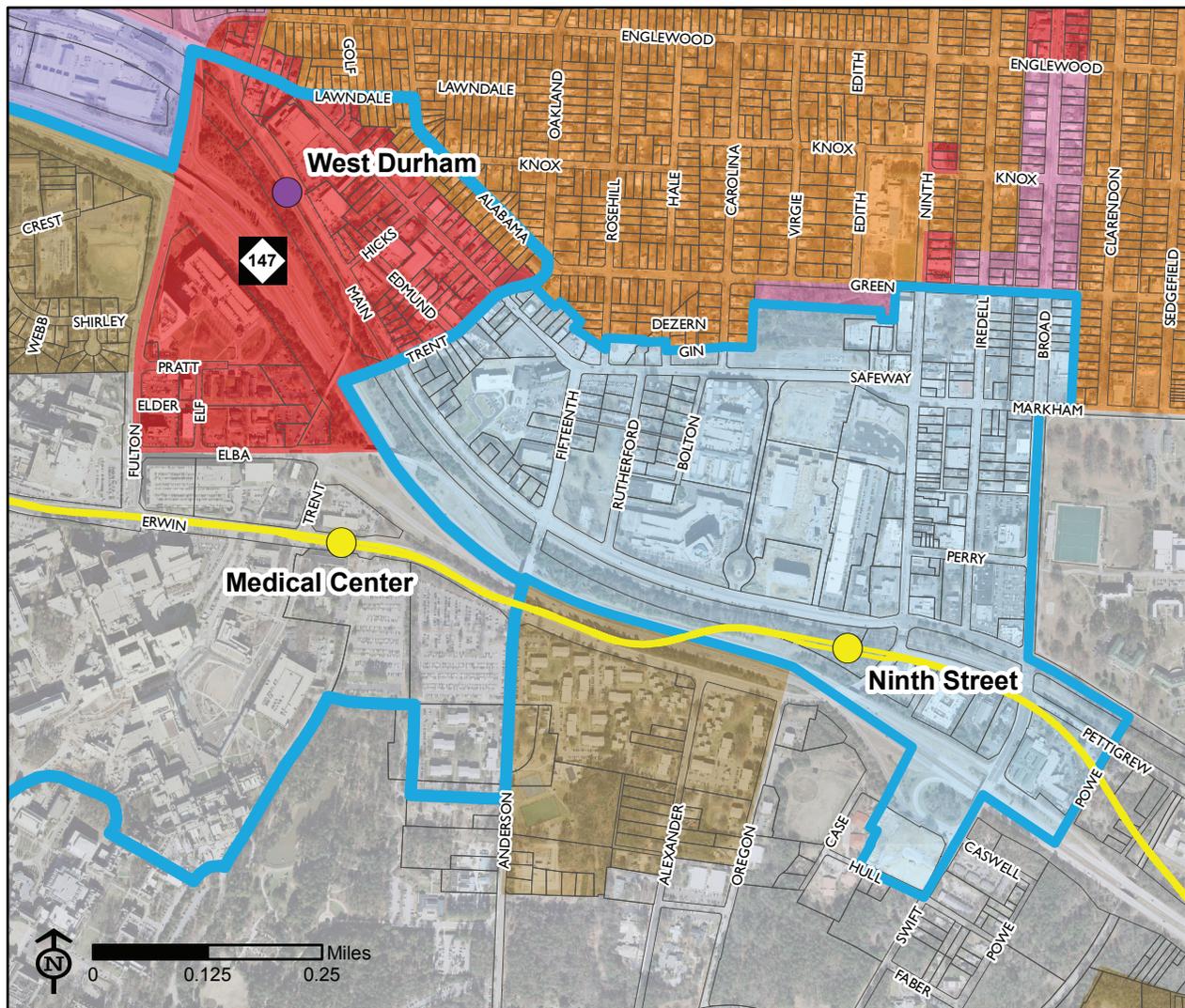
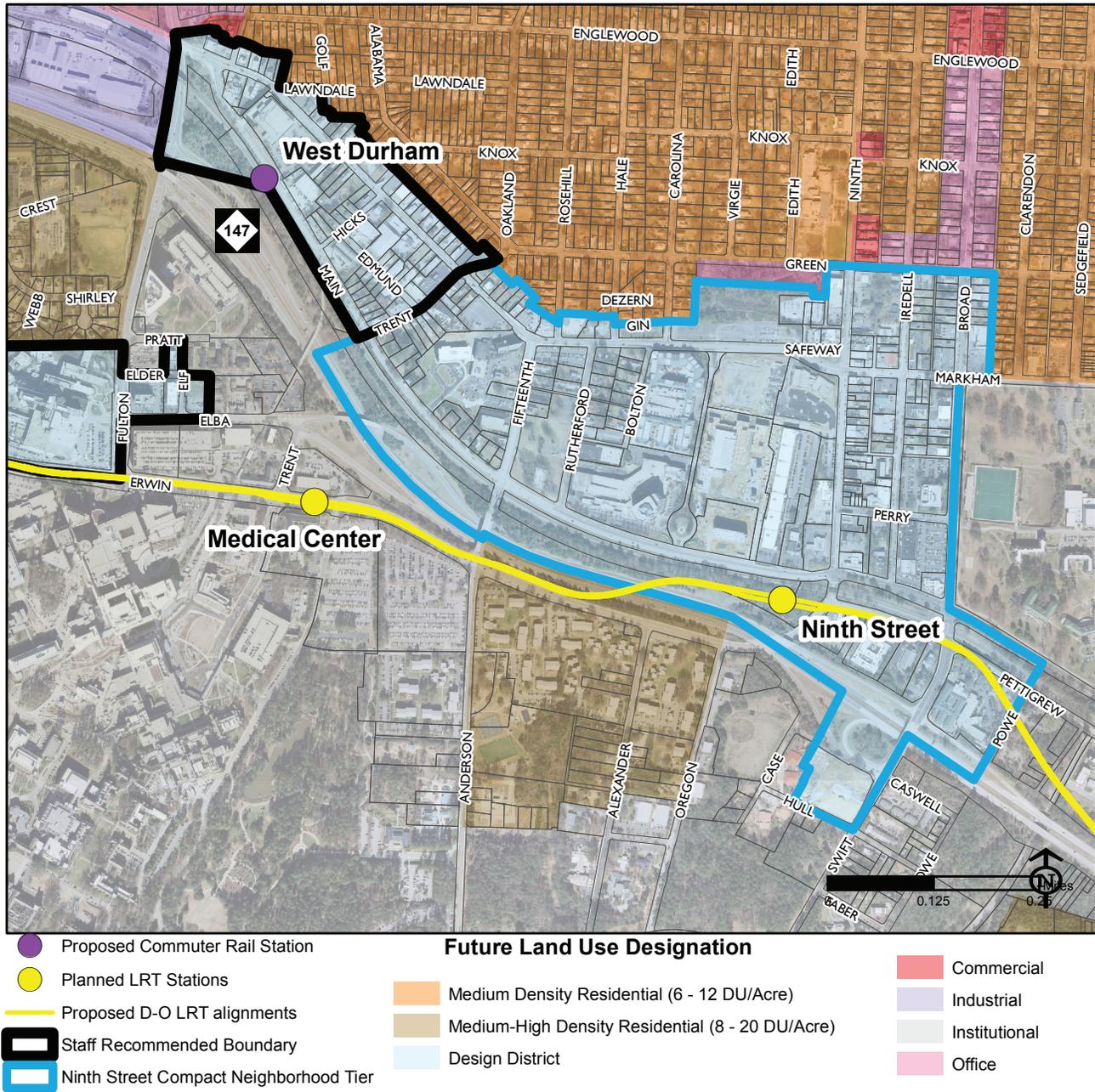


Figure 7: Proposed Future Land Use Map



## Opportunities and Challenges for Compact Neighborhood Development

The area centered around the LaSalle Street and Medical Center stations already exhibit some characteristics of a Compact Neighborhood: urban densities and a mix of uses. Still, there are numerous challenges and opportunities:

### Challenges:

- **The existing roadway network is limited.** This area lacks a grid network of streets to encourage a dispersal of traffic and provide more alternate routes for people on bikes and people walking. The result is that Erwin Road has become a large, congested roadway.
- **Large roads that carry significant traffic volume.** Roads, like Erwin, that are multiple lanes across with fast moving traffic are difficult for people on bikes and people on foot to navigate safely and comfortably. In order to become a walkable and bikeable destination, a new network of smaller streets may be necessary.
- **Vacant land is scarce.** According to recent survey, only 9 acres (1%) of the area within a half-mile of the proposed transit stations along Erwin Road is vacant. Redevelopment of existing land uses is often more difficult and costly than developing a vacant site.

### Opportunities:

- **Apartment complexes are reaching the end of their “lifespan”.** Many of the apartment complexes and townhome communities north of Erwin Road are aging. Duke Manor, for instance, is now over 40 years old. Increased demand for housing in this location may mean that the potential for redevelopment could be approaching in the foreseeable future.
- **Build a new network of streets.** If redevelopment occurs, there are opportunities to construct additional streets through large parcels, which will alleviate pressure on the existing roadway network.
- **Highway access.** Transit-oriented development benefits from access to the highway transportation network. In this area, US 15-501 Bypass and the Durham Freeway provide good access and visibility to these station areas.
- **Major Employment Center.** Duke University and Health System is a powerhouse in the region, employing nearly 35,000 people. While not all jobs are located at the main campuses, there are a significant number of employees who commute to this area. Expanding housing options in proximity of the university and hospital campus presents a considerable opportunity.

## Justification for the Compact Neighborhood Tier Boundary

The recommended Compact Neighborhood Tier boundary emerged as a result of community input and the adherence to the general boundary guidelines developed by staff at the onset of the project. While the boundary description is explained in detail in Figure 8, in general, it includes multifamily and non-residential uses north of Erwin Road, east of US 15-501 Bypass and south of NC 147. The exception is several blocks west of the Ninth Street Compact Neighborhood Tier along Hillsborough Road and Main Street. Intact blocks of single-family housing and historic districts are avoided. Where possible, property lines, major transportation corridors and recorded easements are followed. Plan amendments are evaluated against criteria outlined in paragraph 3.4.7 of the Unified Development Ordinance:

### **Criteria 1: Whether the proposed change would be consistent with the intent, goals, objectives, policies, guiding principles and programs of any adopted plans.**

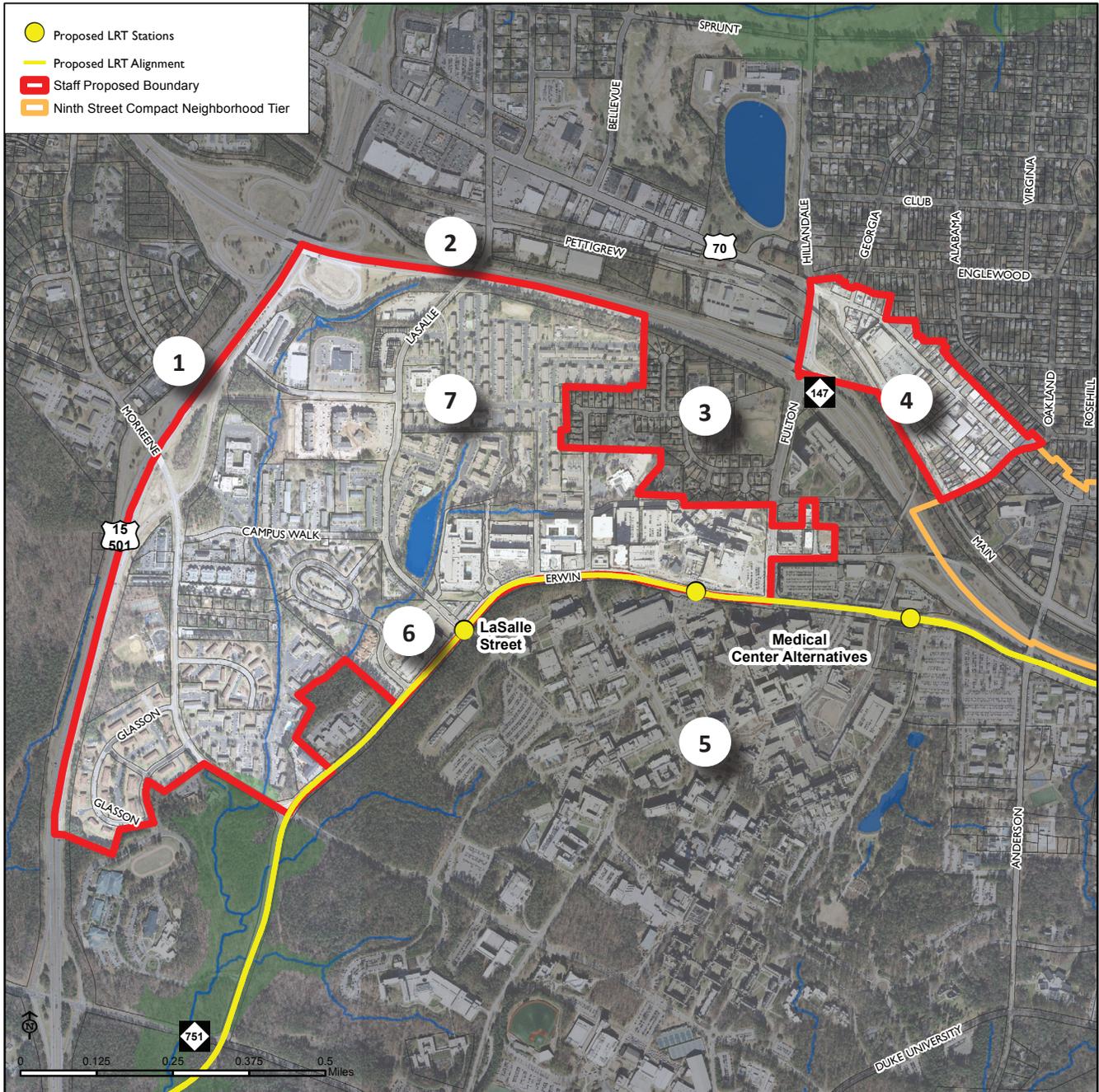
Staff believes the proposed boundaries for the Erwin Road Compact Neighborhood Tier are consistent with numerous city and county goals and policies. For many of the reasons outlined in the introduction, the Durham Comprehensive Plan includes goals, objectives, and policies in support of Compact Neighborhoods surrounding regional rail stations (Policy 2.1.2e., Objective 2.2.4, Policy 2.4.1a.). Amending the Future Land Use Map to Compact Neighborhood is a step toward the vision of higher density, mixed use and walkable neighborhoods that are supported by transit.

A consistent goal within both the City and County Strategic Plans recognizes the need to improve the quality of neighborhoods by improving transportation choice through increasing access to transit, walking and biking. Compact Neighborhoods encourage more density, mix of uses, and walkability around light rail stations, and thus aid the City and County in realizing those goals.

### **Criteria 2: Whether the proposed change would be compatible with the existing land use pattern and/or designated future land uses.**

Much of the area identified to be a part of the updated Compact Neighborhood Tier has been included in the Comprehensive Plan since its adoption. Therefore, the proposed change is largely consistent with previously adopted policies for future growth and will not dramatically impact the existing land use pattern.

Figure 8: Compact Neighborhood Tier Proposed Boundary Explanation



Numbers shown on the map correspond with notes on the following page. Proposed boundaries are a result of community input and adherence to general boundary guidelines developed by staff at the onset of the project. These guidelines are described in the introductory chapter.

**1. US Highway 15-501.** US Highway 15-501 provides a clear western boundary for the Compact Neighborhood Tier. While improved bicycle and pedestrian facilities are planned along Morreene Road, the highway provides a distinct dividing line between lower intensity development to the northwest and higher intensity development closer to Erwin Road.

**2. NC 147 (Durham Freeway).** The Durham Freeway provides a logical northern boundary for the Compact Neighborhood Tier because it limits pedestrian connectivity and signals a shift in development character.

**3. Crest Street Neighborhood.** In recognition of the historical and cultural significance of the Crest Street Neighborhood, staff recommends that the neighborhood should not be included within the Compact Neighborhood at this time. This recommendation signals staff's belief that the neighborhood should remain intact as a single-family neighborhood, though it does not prevent a private entity from pursuing development options in the neighborhood.

**4. West Durham.** Centered around the proposed (but on-hold) West Durham Commuter Rail Station, this area along Main Street and Hillsborough Road is connected to the Ninth Street Compact Neighborhood. The boundary is drawn midblock so that the businesses and houses facing Hillsborough Street are included, but those along Alabama Avenue are not.

**5. Duke University and Medical Center.** Most properties owned by Duke University are under a special zoning district called "University College" that is governed by a development plan. The zoning district allows Duke flexibility to plan on a campus-wide basis for stormwater, parking and sidewalks. A precedent was set in the Ninth Street area to exclude from the Compact Neighborhood areas zoned "University and College," and it is Duke University staff's preference that that policy continue.

**6. Mixed Use Development.** Recently developed mixed use developments, such as Erwin Terrace, now line the north side of Erwin Road, and are already consistent with the principles of a Compact Neighborhood: higher density, mixed use, and pedestrian scale design.

**7. Apartment Complexes and Townhome Communities.** Many of the large apartment complexes and townhome communities north of Erwin Road are aging. Duke Manor, for instance, is now over 40 years old. Increased demand for housing in this location may mean that the potential for redevelopment could be approaching in the foreseeable future.

### Criteria 3: Whether the proposed change would create substantial adverse impacts in the adjacent area or the City or County in general.

This section will evaluate and discuss what potential environmental, housing and property values, transportation, and community service impacts could arise as a result of implementing a policy in support of Compact Neighborhoods. While in many cases it is too early to determine specific impacts, broader issues are discussed and actions are proposed that are intended to allieviate potential negative impacts.

#### Environment

Whenever proposals to increase density are on the table, a common concern is that it will negatively impact environmental systems. As an almost fully developed urban area, many of the natural characteristics of this area are no longer present.

**Natural Heritage Areas.** There are no documented Natural Heritage Areas within the boundaries of the proposed Compact Neighborhood Tier.

**Tree Coverage.** Because Erwin Road is already designated as a Compact Neighborhood, the ordinance does not require a minimum tree coverage. Instead, to promote a more urban environment, street trees and landscaping in vehicle use areas are required.

**Riparian Buffers.** Because the proposed Alston Avenue Compact Neighborhood Tier is not within a Watershed Protection Overlay, the width of stream buffers would not be impacted (50 feet is required regardless).

**Impervious Surface Area.** A large percentage of the area has already been converted to impervious surface (approximately 63%). It is unlikely that increasing density through redevelopment and infill of vacant lots will result in significant land cover conversion.

#### Housing and Property Values

Across the country, a common trend in areas near light rail transit is the increase of land values.<sup>1,2</sup> While this can be beneficial to the broader tax base, there can be some unintended negative consequences for low income households and renters. In 2014 the City Council and Board of County Commissioners adopted a resolution that at least 15% of all housing within ½ mile of proposed transit stations should be affordable to those making 60% or less than Area Median Income. Housing is generally considered unaffordable if rent or mortgage payments plus utility costs exceed 30% of income.

The most recent Planning Department data (January 2015) shows that 51.3% of occupied housing within a ½ mile of the Alston Avenue Station is affordable to those earning 60% or less of Area Median Income. While this proposed Compact Neighborhood offers affordable living options today, preserving that affordability is of significant importance in the future as light rail and increased development interest come to the area.

Through its Affordable Housing and Transit initiatives, the City is taking steps to create and preserve affordability. Enterprise Community Partners has presented recommendations to the City Council, including that the Planning Department evaluate the feasibility of an enhanced density bonus in Compact Design zoning districts near proposed light rail stations. This possibility will be fully explored prior to any city-initiated zoning of Compact Neighborhood Tiers.

**Crest Street Neighborhood.** Special consideration needs to be paid to the Crest Street (Hickstown) Neighborhood. This largely single-family neighborhood was relocated as part of an environmental justice lawsuit over the construction of the Durham Freeway in the early 1980s. It remains a cohesive African American community today, with a large proportion of residents who own their homes. Due to the desirable proximity of Duke University and the medical centers, many in the neighborhood report pressure from developers to sell their property, presumably for its use as a lucrative rental or for denser redevelopment.

The 2005 version of the Future Land Use Map included the neighborhood in the Compact Neighborhood Tier. After meeting with the neighborhood, many residents expressed a desire to be removed from the Tier to signalize that the neighborhood should be preserved as single family. Others were equally interested in staying within the Tier designation. Based upon staff's guidelines for boundaries generated at the onset of this project and the input received from the residents, staff proposes to leave this single-family neighborhood out of the Compact Neighborhood Tier at this time, and recognizes that the City Council can consider including it in the future if it deems it appropriate.

### **Transportation**

As a major employment center, university and mixed use neighborhood, the proposed Erwin Road Compact Neighborhood is already a multi-modal destination. Students and employees arrive to campus and their jobs via bus, bike, on foot and by car. Erwin Road forms the backbone of all of this transportation activity. With few alternative routes, Erwin is becoming congested and not a safe or pleasant environment to walk or bike. The continued success of Erwin Road as a Compact Neighborhood largely hinges on addressing congestion and building a more complete network of streets, sidewalks, and bike facilities.

**Traffic.** Level of Service (LOS) is a common measure of traffic flow and density of vehicles. For city roads in Compact Neighborhoods, where increased activity is encouraged, Comprehensive Plan Policy 8.1.2a. indicates LOS E, which allows for some congestion, is acceptable. The policy for state roads is to maintain LOS D, which allows for faster traffic flow.

As part of a long range transportation planning effort, the DCHC Metropolitan Planning Organization conducts a Deficiency Analysis to demonstrate which roadways will exceed LOS standards given future growth projections. Because it is premature to estimate with any accuracy the amount of traffic generated by future development and redevelopment in the Patterson Place Compact Neighborhood Tier, the Deficiency Analysis is the best proxy.

The Deficiency Analysis assumes population and employment figures from the year 2040 on the current transportation network in order to highlight what roads will need future improvements. While the volume of traffic is expected to increase to some degree on every roadway, listed below are roads where traffic volume is expected to exceed roadway capacity when operating at a LOS D.

- Erwin Road (LaSalle Street to Fulton Street)
- Morreene Road (Campus Walk to US 15-501)

**Pedestrian and Bicycle.** The existing networks of sidewalks and bike lanes in the proposed Erwin Road Compact Neighborhood area are limited. While major roads, like LaSalle Street and Erwin Road do have sidewalks, they form a limited network. The Durham Walks! Pedestrian Plan and the Durham Comprehensive Bicycle Plan recommend additional segments of sidewalks and bike facilities, as can be seen in Figure 9 and 10. Planning, design and construction of sidewalks on Campus Drive and LaSalle Street are in progress (TIP C-5178). Sidewalks and bike lanes on Morreene Road are funded (TIP C-4928) and expected to begin construction in 2016.

As mentioned previously, if redevelopment occurs under Compact Neighborhood standards, there would be opportunities to create an additional street network. Sidewalks with enhanced streetscape features, such as benches, trash receptacles, and trees/planter boxes would be required. Enhancing the network of streets and adding amenities will help this area, over time, become more pedestrian oriented.

Under the broad umbrella of Station Area Planning, the Planning Department is collaborating with other departments on the Station Area Strategic Infrastructure (SASI) study. This study is intended to identify and prioritize bicycle and pedestrian projects that will enable safe and convenient access to the light rail stations.

### **Services and Infrastructure.**

The proposed Compact Neighborhood Tier is already within the city limits of Durham. Future development that increases density may cause an influx in demand in the following areas:

**Water and Wastewater.** Water main distribution systems serve to supply potable water and to support fire suppression throughout the community. A well-designed system can maintain adequate pressure to support demand of individual properties and provide high flow rates to fire hydrants/fire suppression systems in emergency situations. The material and age of the system's water mains can be factors in system breaks, leaks, and pressure and flow degradations.

Wastewater or sanitary sewer infrastructure consists of a collection of gravity flow sewer mains, lift stations, and pressurized force mains that transport sewage to a wastewater treatment plant. An efficient collection system has the capacity to accommodate all of the existing land uses within its particular sewer basin. Beyond capacity, the material and age of pipes within a system can also impact its effectiveness.

The City of Durham maintains water and sanitary sewer infrastructure within the proposed Erwin Road Compact Neighborhood Tier. Based on communication with the City of Durham's Water Management Department, because the area is already heavily urbanized, the system appears to be adequate in size and extent to accommodate proposed changes to land use.

Figure 9: Existing and Proposed Pedestrian Network

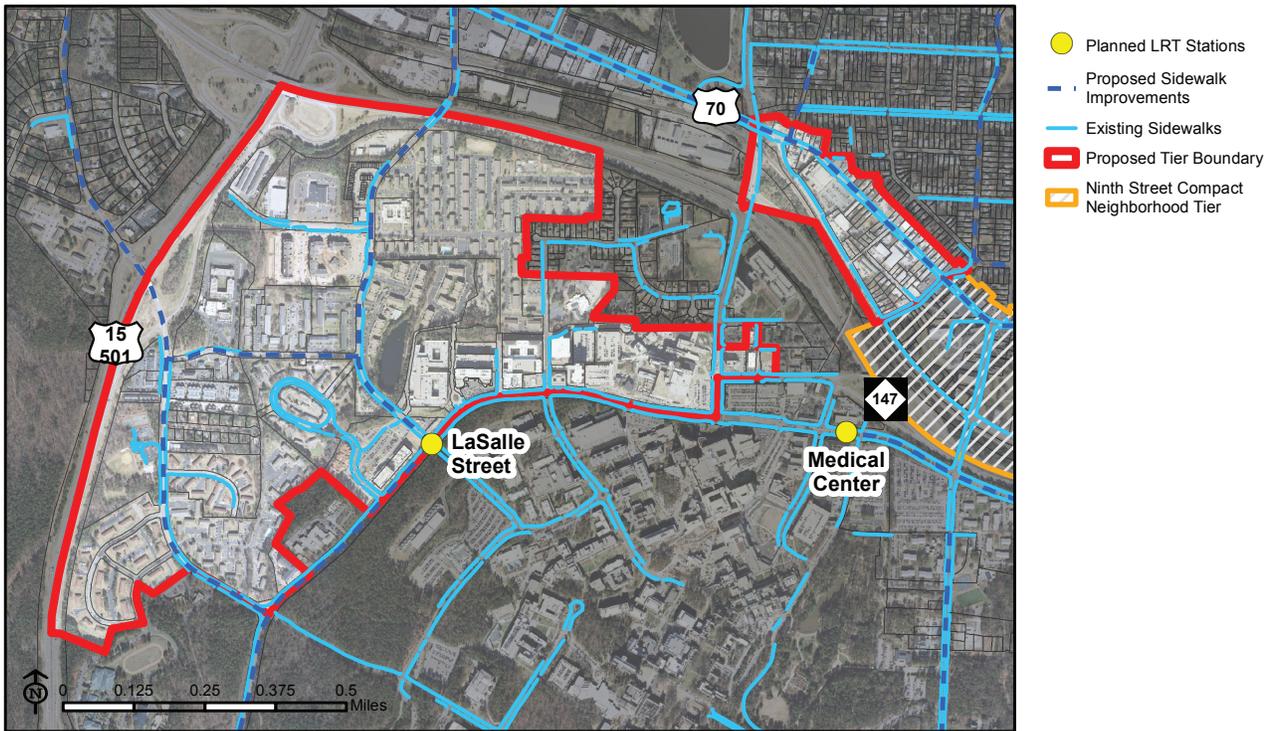
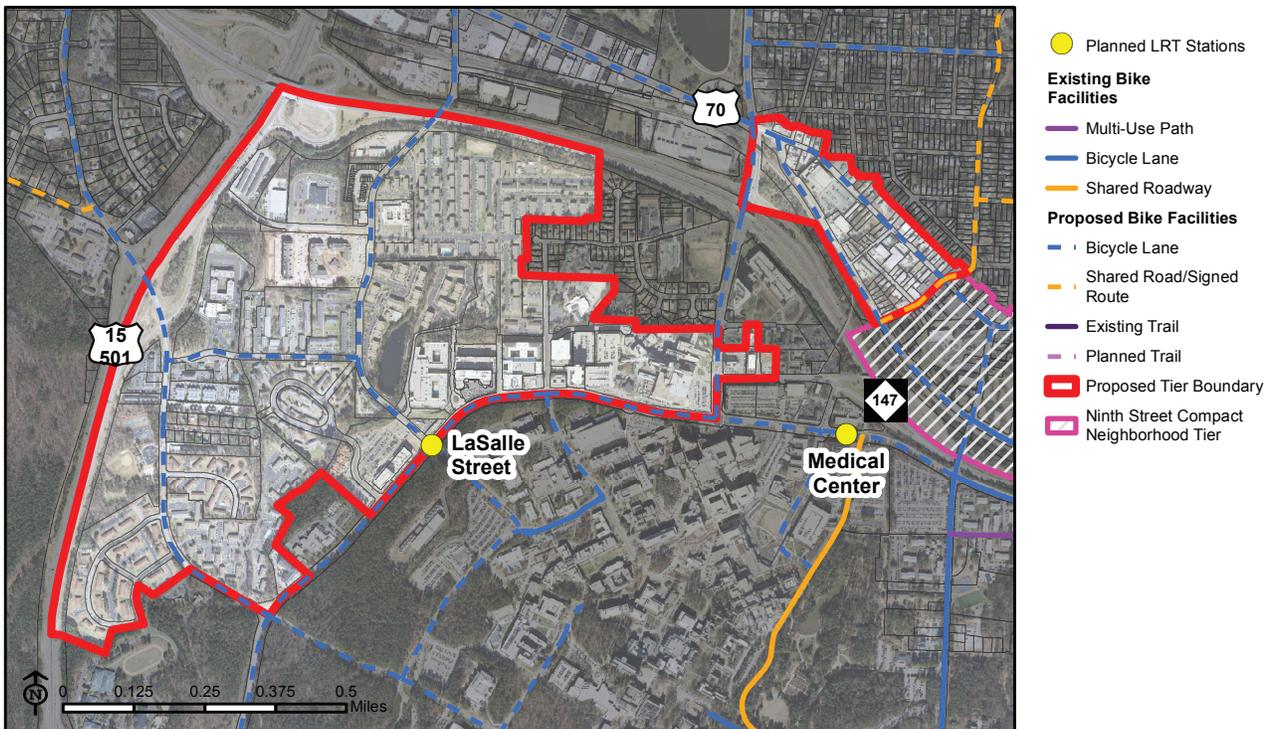


Figure 10: Existing and Proposed Bicycle and Trail Network



**Schools.** Students from the proposed Erwin Road Compact Neighborhood are in the attendance zones of four public schools. Figure 11 summarizes information on school capacity and projected student enrollment from the Durham Public School’s 2013 Long Range Facility Study.

The Durham Comprehensive Plan specifies a system wide level of service standard of 110% capacity. Once that level is reached, policy 11.1.1b. directs the Planning Department to consider mitigation commitments from private developers or recommend denial of zoning map changes that cause student generation to increase above the rate of current zoning. While the policy is applied at a system wide basis because of liberal magnet and transfer policies, it should be noted that Riverside High School is already operating

over 110% capacity levels. There are currently no scheduled renovations to expand capacity.

Amending the Future Land Use Map to Compact Neighborhood could lead to additional student enrollment overtime. While it is premature to determine with any certainty what the impact will be, Durham Public Schools has been made aware of these potential impacts. The Planning Department is committed to working with the school system to reflect changes to the Future Land Use Map in the next iteration of the Long Range Facility Study, which is updated every two to four years.

**Figure 11: Projected Student Enrollment**

School	2012-13 Capacity	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Forest View	659	658	664	670	679	680	681	680	678	679	686	697
E.K. Powe	404	402	404	406	408	409	409	409	408	408	411	414
Brogden Middle	872	683	704	684	668	652	645	666	683	691	688	670
Riverside High	1540	1759	1737	1740	1730	1730	1748	1716	1713	1715	1723	1745



**Criteria 4: Whether the subject site is of adequate shape and size to accommodate the proposed change.**

The proposed Erwin Road Compact Neighborhood Tier is 480 acres, and is of adequate shape and size to accommodate the proposed change.

Amendments to Tier Boundaries are also evaluated against additional criteria outlined in paragraph 3.4.8 of the Unified Development Ordinance:

**Criteria A: The site is contiguous to the proposed Tier.**

The proposed Compact Neighborhood Tier forms a contiguous area and does not leave an isolated pocket of Urban Tier.

**Criteria B: The site is not in the drainage basin for Lake Michie or Little River or in the one-mile critical area around Jordan or Falls Reservoirs.**

The proposed Compact Neighborhood Tier is not located in the drainage basin for Lake Michie or Little River and is not within a watershed protection critical area.

**Criteria C: The extension does not violate any agreements with neighboring jurisdictions.**

The proposed Compact Neighborhood Tier is entirely within the City of Durham and does not violate agreements with neighboring jurisdictions.

**Criteria D: If the proposal is to expand the Suburban Tier, extending utilities to service the site is determined to be technically feasible by the Public Works Director or designee and will not result in inordinate cost to the City.**

This evaluation criterion does not apply; the proposal does not expand the Suburban Tier.

## Endnotes

<sup>1</sup> Booz Allen Hamilton. "Impacts of Rail Transit on Property Values." <http://reconnectingamerica.org/assets/Uploads/bestpractice083.pdf>

<sup>2</sup> Dukakis Center for Urban and Regional Policy. "Maintaining Diversity in America's Transit-Rich Neighborhoods: Tools for Equitable Neighborhood Change." October 2010. [http://www.northeastern.edu/dukakiscenter/wp-content/uploads/2011/12/TRN\\_Equity\\_final.pdf](http://www.northeastern.edu/dukakiscenter/wp-content/uploads/2011/12/TRN_Equity_final.pdf)