

CHAPTER

2

EXISTING CONDITIONS

WHAT'S INSIDE

Introduction

The introduction sets the stage for the existing conditions analysis and defines the study area of the CTP.

Demographics and Travel Patterns

This section highlights demographic trends in Holly Springs and compares them to that of the county and state.

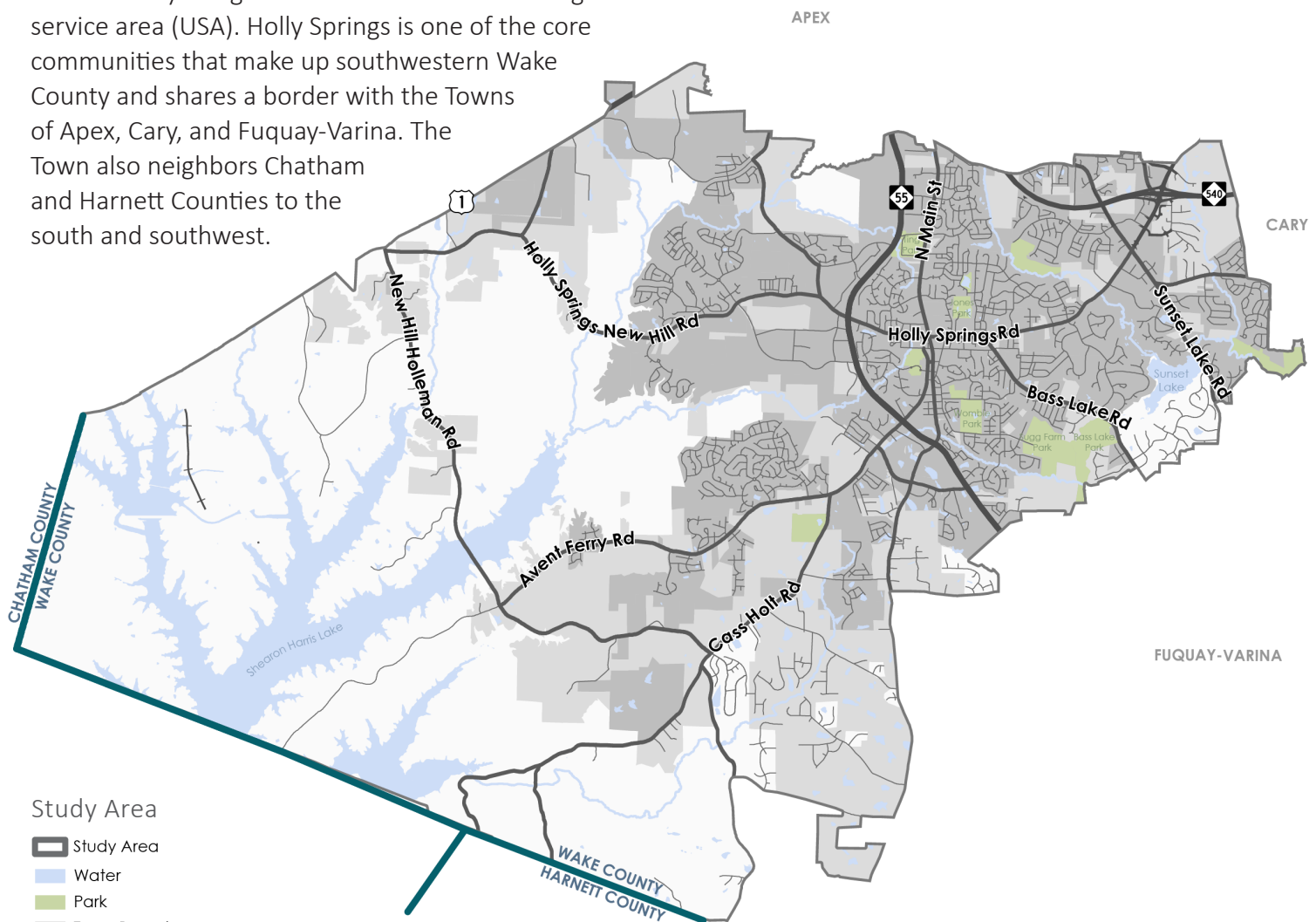
Multimodal Transportation

The content under this heading reflects portions of the full Existing Conditions Report including roadway mobility indicators, bicycle and pedestrian infrastructure, transit options, and safety in Holly Springs.

Chapter two of the CTP presents background information on the state of transportation in Holly Springs as well as relevant socio-demographic trends that affect transportation. This chapter is not intended to be a full accounting of the Town's infrastructure, nor is it intended to capture all information relevant to the process, but instead sets the stage for a conversation regarding current conditions, plans and practices, and the importance of mobility in Holly Springs. This foundation, along with input from the first round of public engagement, provides the information needed for the development of recommendations responsive to the needs and values of Holly Springs. The full Existing Conditions Report is found in Appendix C.

Study Area

The Holly Springs CTP takes a comprehensive look at mobility throughout the entire Town and its surrounding areas. The Study Area considers the transportation needs within the Town's municipal boundaries as well as the Town's Extraterritorial Jurisdiction (ETJ) and portions of surrounding unincorporated Wake County designated as the Town's short range urban service area (USA). Holly Springs is one of the core communities that make up southwestern Wake County and shares a border with the Towns of Apex, Cary, and Fuquay-Varina. The Town also neighbors Chatham and Harnett Counties to the south and southwest.



Study Area

- Study Area
- Water
- Park
- Town Boundary
- ETJ Boundary
- County Line

Demographics and Travel Patterns

At a Glance

The demographic makeup of the community is crucial when considering transportation and mobility within Holly Springs. This section relies on the 2019 American Community Survey (ACS) 5-year estimates and the 2020 Decennial Census from the US Census Bureau to summarize relevant data for the community. This section provides a brief overview of the Town's demographics, including major shifts and trends that will affect mobility in the coming decades.

Demographic Comparisons

While analyzing demographic data it's important to recognize the context of an area. To do so, demographic indicators for the Town of Holly Springs were compared against those of Wake County and the state of North Carolina. The following table displays these comparisons.

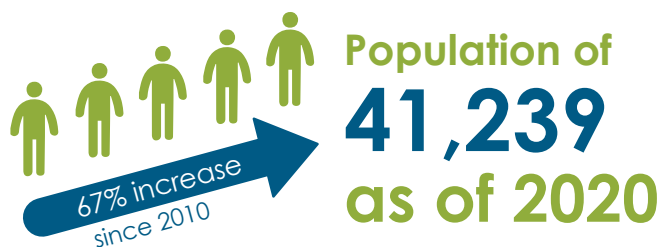
Demographics	Holly Springs	Wake County	North Carolina
Median Household Income	\$116,667	\$84,215	\$57,341
Racially Underrepresented Population ⁺	23.1%	41.2%	37.8%
Percent Limited English Proficiency	0.4%	2.5%	2.1%
Percent Individuals Below Poverty Level	3.4% [*]	9.1%	14.7%
Percent Youth (Under 18)	30.8%	24.2%	22.4%
Percent Elderly (65 and Over)	9.3%	11.3%	15.9%
Percent Disabled	5.6% [*]	8.6%	13.4%

^{*}This data was evaluated at the ACS Place level for the Town of Holly Springs as opposed to the Block Group level.

⁺This data was sourced from the 2020 Decennial Census Redistricting Data.

Population Growth

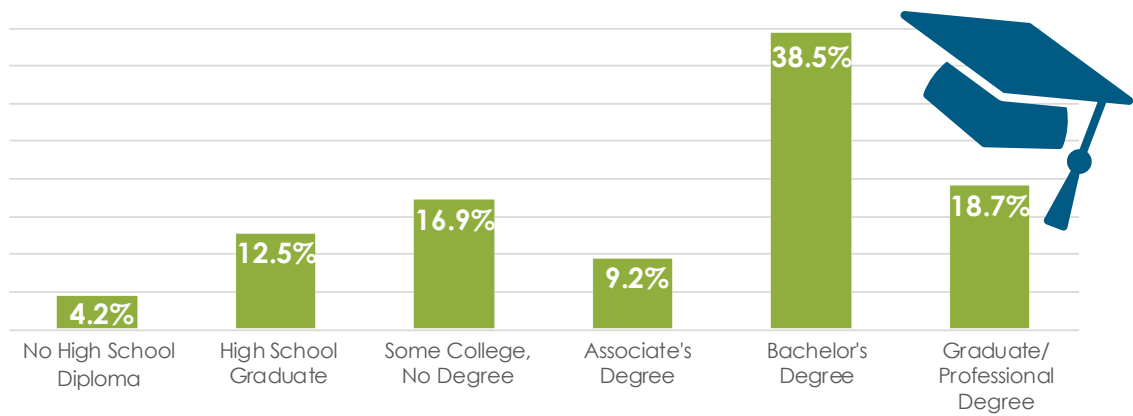
As of 2020, the population of Holly Springs was 41,239, up from 24,661 in 2010, according to the US Census. That's an increase of over 67% in just 10 years. During this same 10 years, the population within Wake County increased by just 25%.



US Census: 2020 Decennial Census Redistricting Data

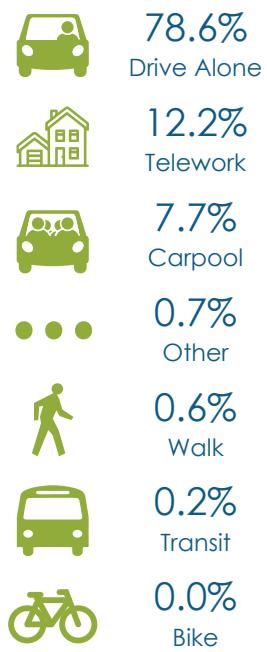
Educational Attainment

Educational attainment is an important indicator for the success and prosperity of an area. A town with a greater population of people with a bachelor’s degree or higher tends to have more job opportunities in a diversity of fields, stimulating a better economy in the area. Nearly 60% of Holly Springs residents, over the age of 25, have a bachelor’s degree or a degree at the graduate, professional, or doctoral level. This is significantly higher than the degree of attainment at these education levels for the state of North Carolina and about four percentage points higher than Wake County.



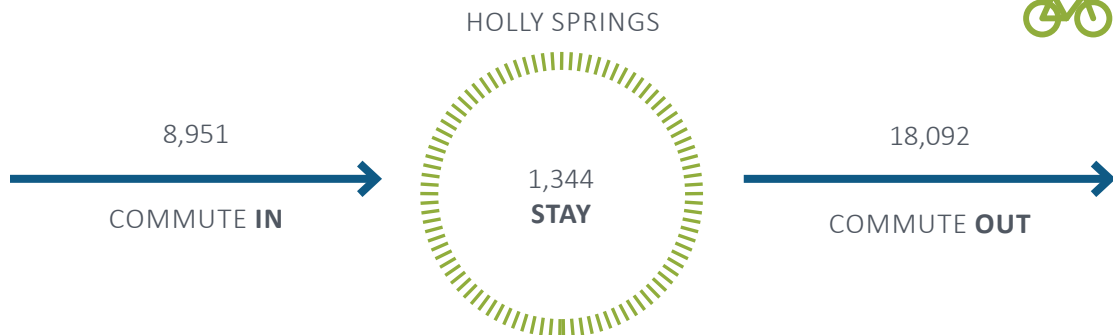
Mode Split

Over 78% of Holly Springs residents drive to work alone and the share of commuters bicycling and walking to work has remained relatively constant in recent years—approximately 0.6% of people walk to work and the percent that bike is negligible. Holly Springs has a lower share of active commuters than its peer communities in Wake County, due in part to many residents leaving for employment elsewhere in the region. Additionally, 12.2% of Holly Springs working residents telework. This is around two percentage points higher than many other Wake County communities.



Travel Flow

Suburban commuting patterns make up a significant portion of Holly Springs’ traffic. Just over 73% of Holly Springs residents travel greater than ten miles to work. Understanding the flow of traffic in, out, and within Town helps to identify the challenges and opportunities for transportation network improvements. Recommendations will be developed to improve travel within Holly Springs while keeping the needs of inter-regional commuters in mind.

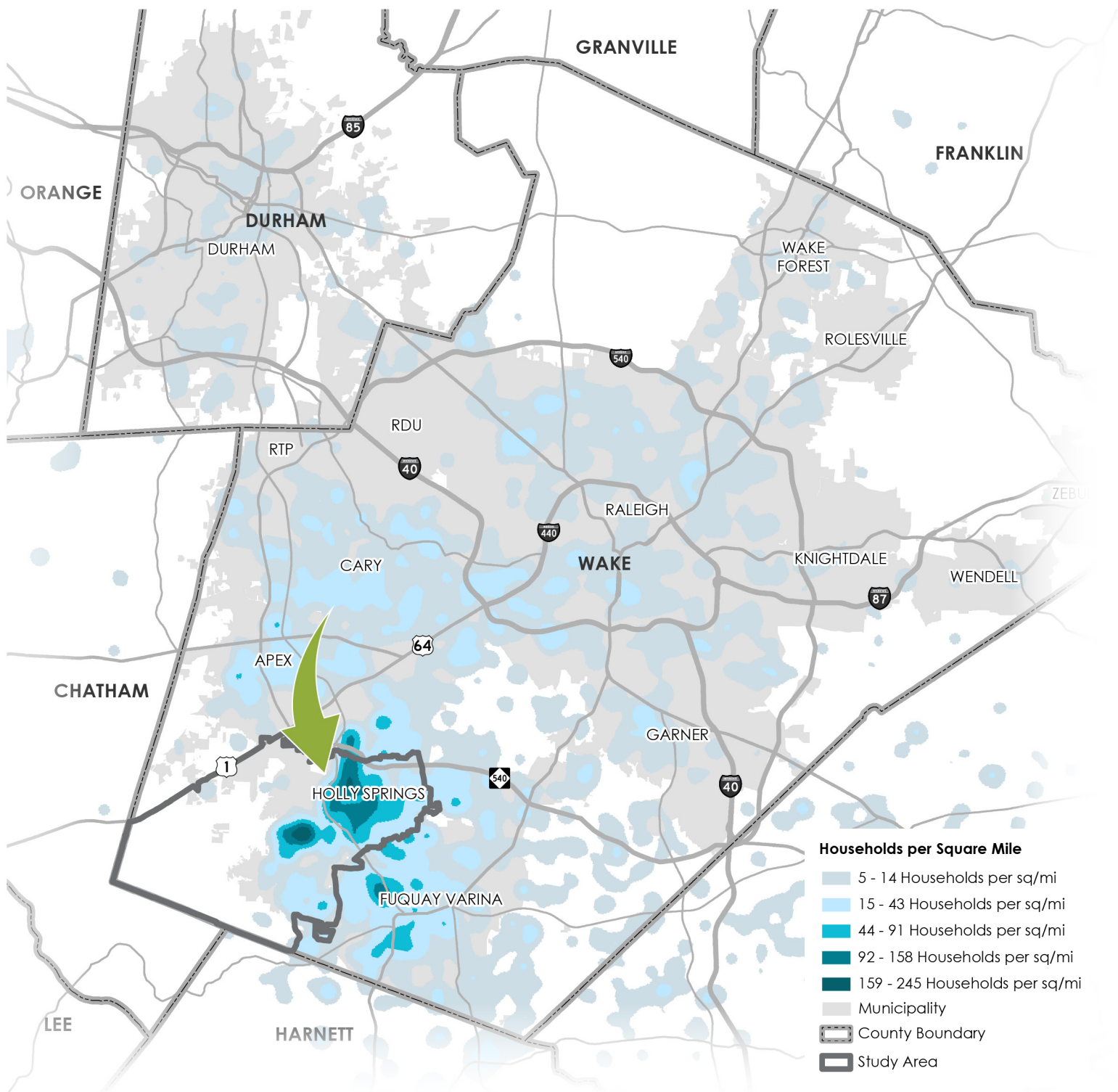


US Census: 2019 American Community Survey (ACS) 5-year estimates; US Census Bureau, Center for Economic Studies: On the Map, 2019

Where Holly Springs Workers Live

The map below shows the distribution of where those who work in Holly Springs live. Only 4.7% (1,344) of the working residents in Holly Springs stay in Holly Springs for work. Another 8,951 workers commute into Holly Springs from surrounding communities, many of those just outside the Study Area.

Households of Holly Springs Workers

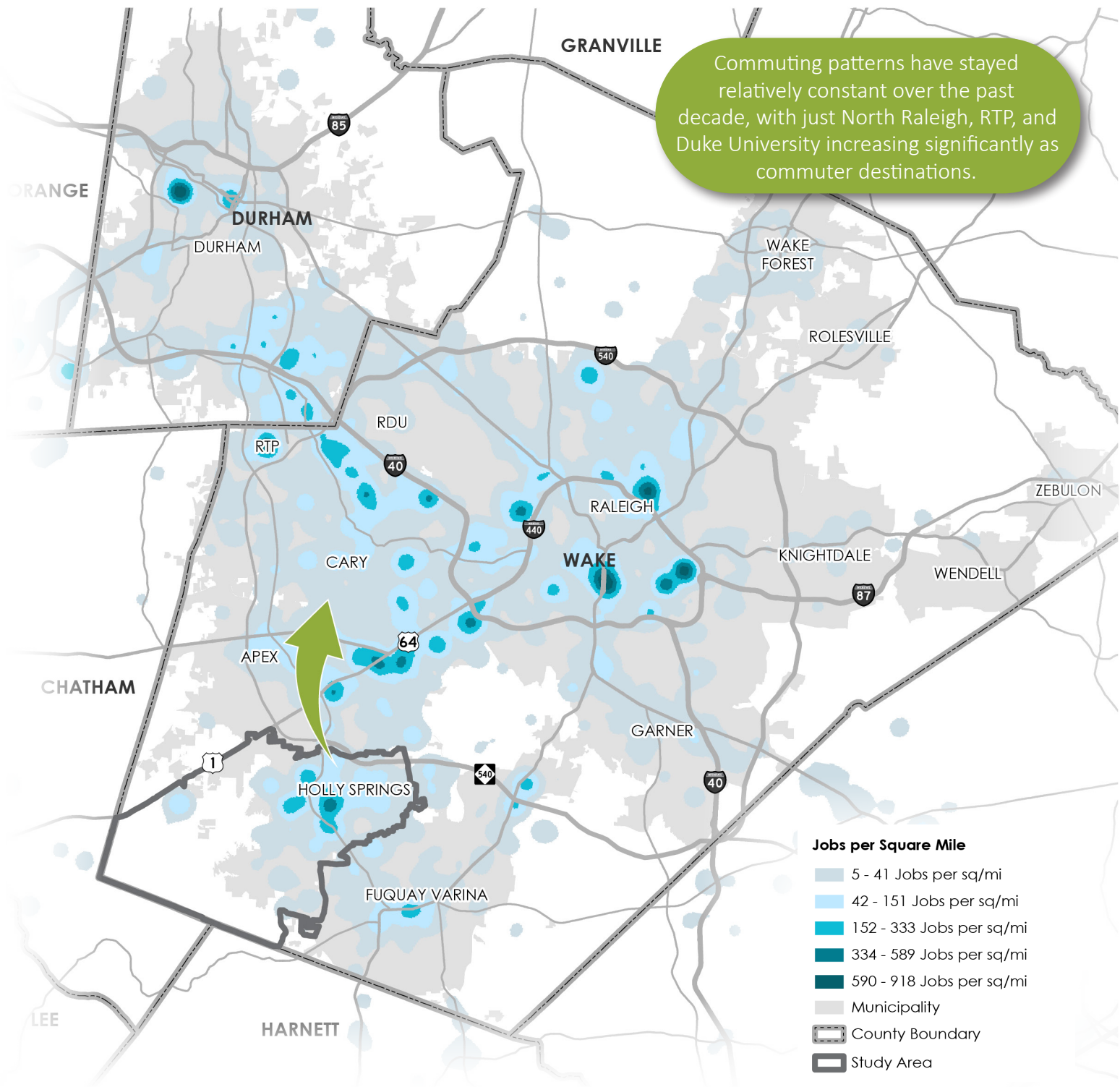


US Census Bureau, Center for Economic Studies: On the Map, 2019

Where Holly Springs Residents Work

More than 73% of Holly Springs residents leave Holly Springs and commute greater than 10 miles to work. This is further evidenced by the figure below, which shows the distribution of places around the region where Holly Springs residents traveled to work in 2019. Major workplace attractions include regional employment hubs such as Downtown Raleigh, Research Triangle Park (RTP), WakeMed, Duke Raleigh, and the area in Cary near the intersection of US 64 and US 1.

Workplaces of Holly Springs Residents



US Census Bureau, Center for Economic Studies: On the Map, 2019

Multimodal Transportation

The improved movement of people within and through the Town of Holly Springs is one of the main goals that the CTP strives to achieve. To create recommendations that support this goal, the state of mobility as it exists today has to be analyzed. Mobility can be measured in different ways using many metrics. This section looks at the transportation system through measures of quality, quantity, connectivity, traffic, and safety in order to create a picture of mobility in Holly Springs.

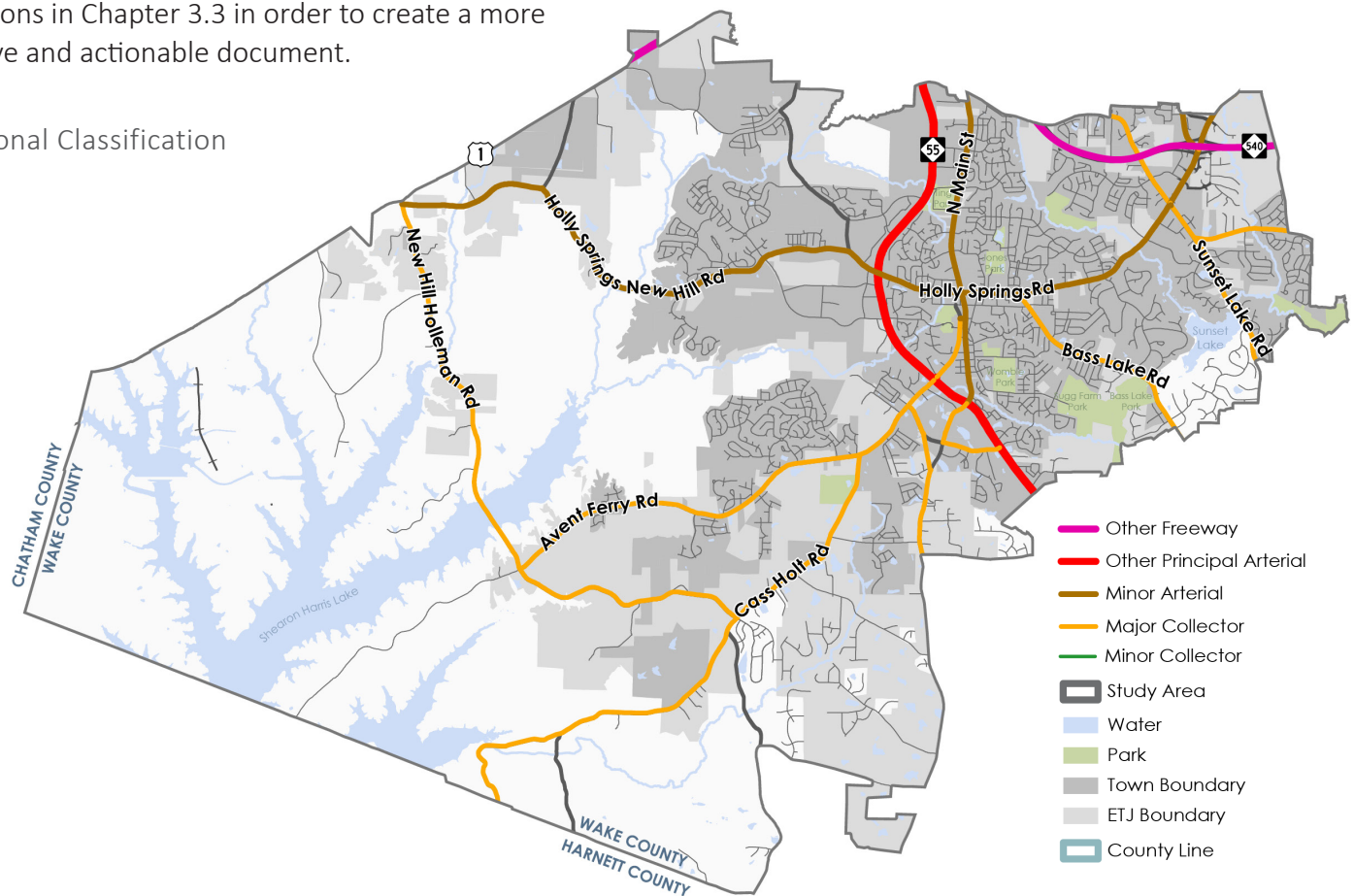
Roadways

Functional Classification

Functional classification is the process by which streets of different characteristics and usage are grouped into broad categories depending on the service they are intended to provide. The roadway character and traffic operation of streets defines these categories. Two major considerations for classifying arterials from neighborhood streets are access and mobility.

Classifying roadways by their function is a federal practice and an important one because of its implications on planning, designing, and funding of a project. The classified roads shown on the figure below are state-owned roadways; however, the 2011 CTP identified typologies such as thoroughfare, collector, and local streets that are not within the State highway maintenance system. These discrepancies in terminology can cause confusion when pursuing funding or communicating with the development community. The updated CTP bridges the gap between Town and state road classification definitions in Chapter 3.3 in order to create a more effective and actionable document.

Functional Classification

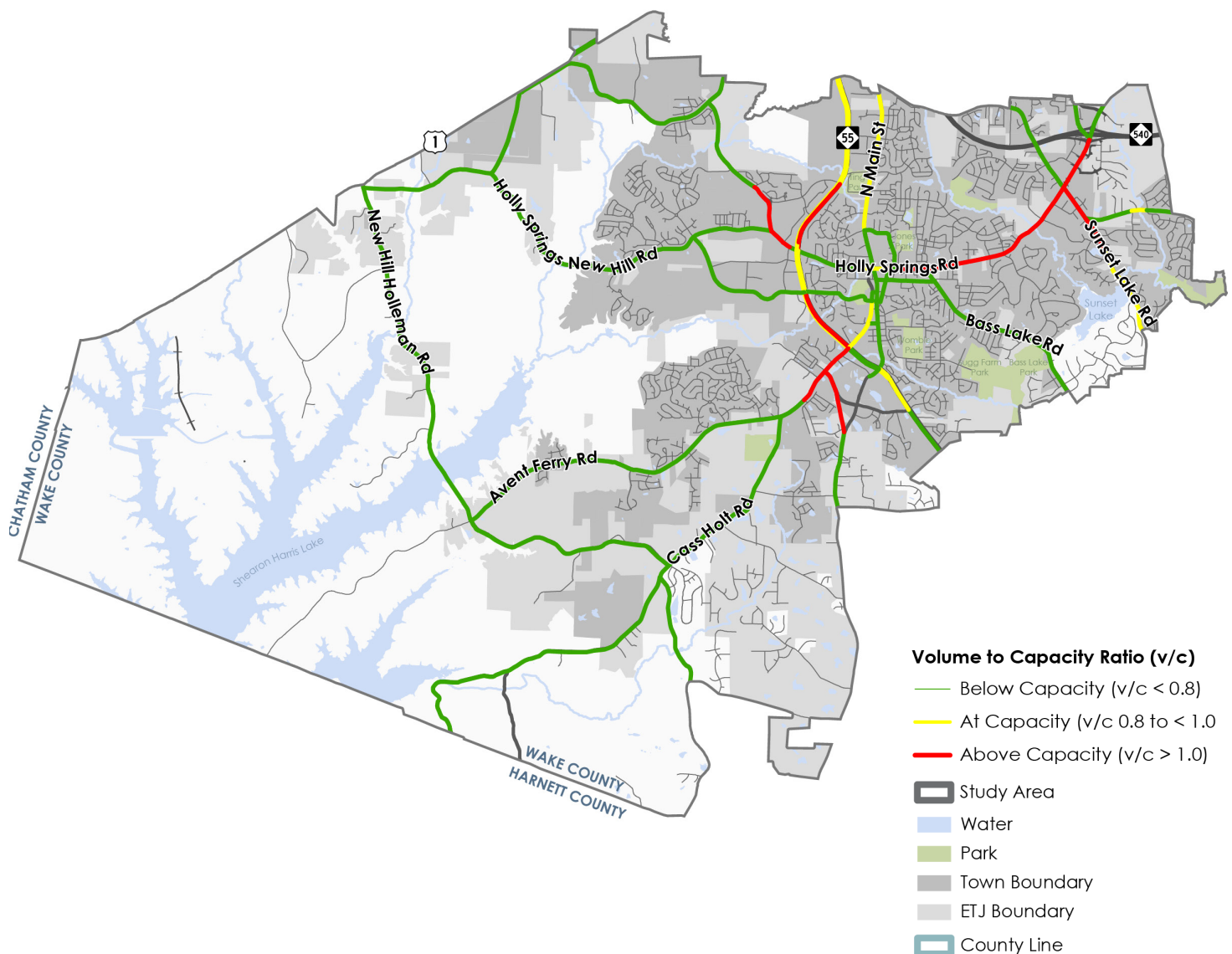


NCDOT Functional Classifications

Existing Volume to Capacity Ratio

Sophisticated models can simulate the interaction of estimated demand and available supply at a regional scale. The Triangle Regional Model comprises both the Raleigh urbanized area and the Durham-Chapel Hill urbanized area. For the purposes of this document, current congestion levels are derived from the Triangle Regional Model 2013 Base Year Model and are symbolized based on volume-to-capacity (V/C) ratios. The model represents the roadway network and traffic volumes as they were in 2013. Modeled traffic congestion provides system-level insights into congestion issues and can indicate corridors that warrant higher levels of study and analysis or capacity improvements. Roadways reflecting congested conditions (with a V/C above capacity) in the 2013 model include NC 55, Main Street, Holly Springs Road, and Sunset Lake Road.

2016 Congestion



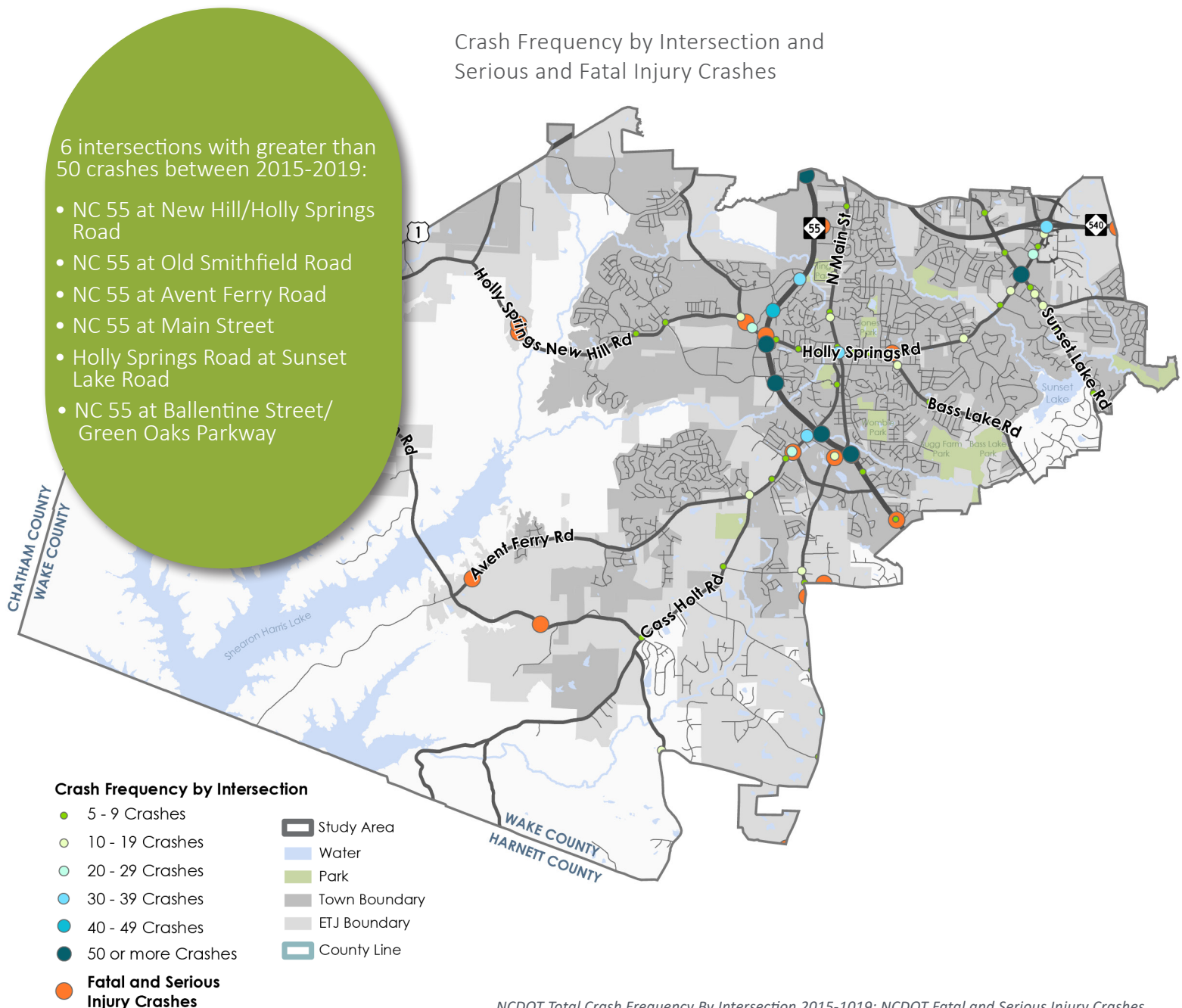
Triangle Regional Model

Safety and Crashes

Crash Frequency

Traffic safety is a key component for community-wide mobility and accessibility. While not the only indicator of potential safety improvements, examining crash history and traffic patterns can help to identify locations that may benefit from design, operational, or signage-based safety recommendations. The data on the figure below indicates crashes at intersections along state owned roads where data was available.

NC 55 (GB Alford Highway) hosts the greatest frequency and severity of crashes within the study area. Between 2015-2019 a total of five fatalities and 14 serious injury crashes were reported. Of these, four crashes involved pedestrians—three of which resulted in a fatality—as can be seen on the figure below. Fifty percent were frontal impacts, and another 43% resulted from lane departures.



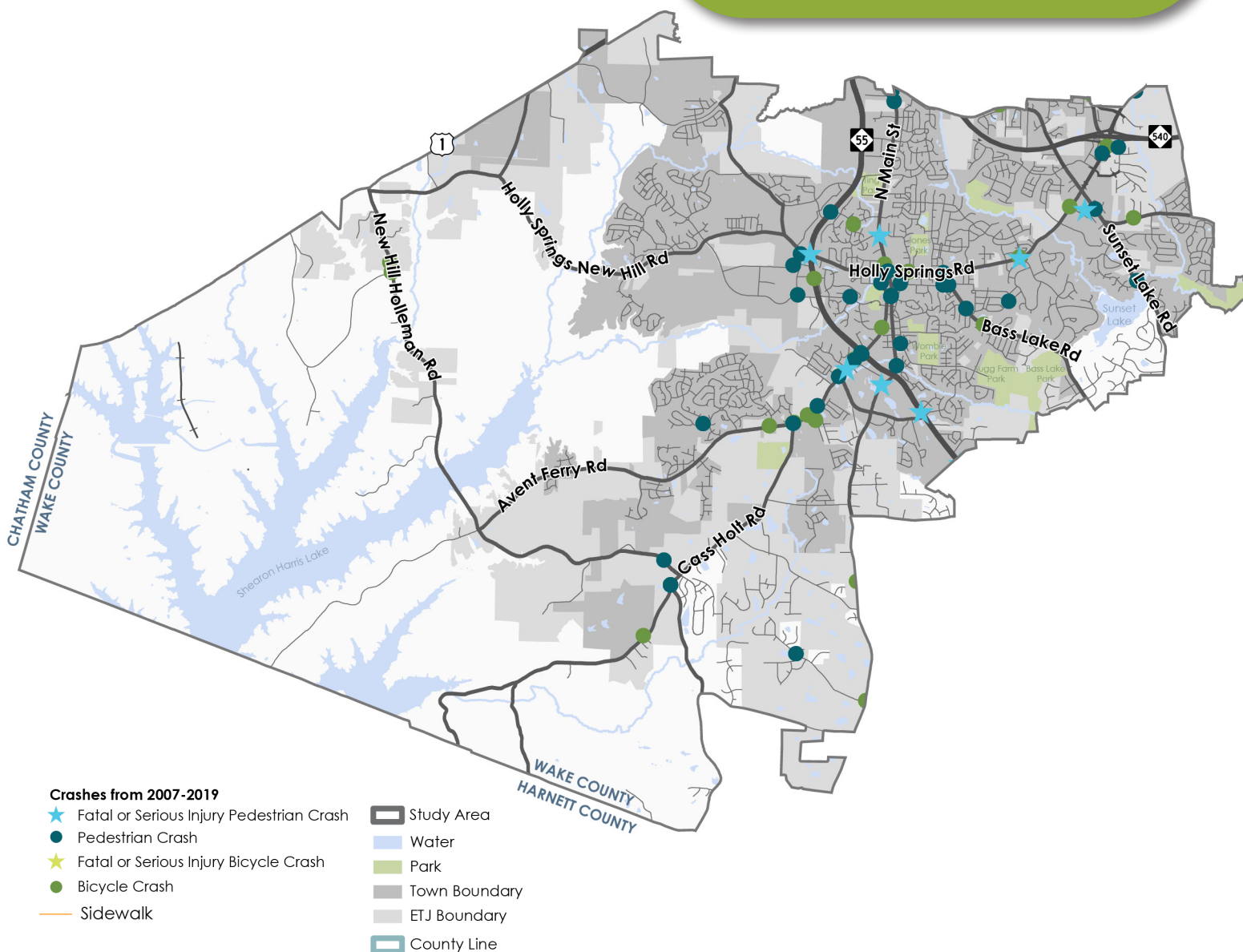
NCDOT Total Crash Frequency By Intersection 2015-2019; NCDOT Fatal and Serious Injury Crashes

Bicycle and Pedestrian Crashes

Improving overall safety and mobility of active transportation users requires a look beyond existing infrastructure. Analyzing the locations at which crashes involving bicyclists and pedestrians occur can help to identify where deficiencies in the existing bicycle and pedestrian networks exist or which gaps in the network would likely benefit more from safety improvement projects. Between 2007 and 2019, 24 bicycle crashes and 55 pedestrian crashes were reported in Holly Springs where data was available along state-owned roads. While there were no bicycle fatalities reported, there were five pedestrian fatalities reported over the 13-year crash history provided by the North Carolina Department of Transportation (NCDOT).

Approximately 42% of pedestrian crashes occurred during dark or dawn/dusk conditions. Nearly 36% of pedestrian and 54% of bicycle crashes occurred near or within an intersection.

Bicycle and Pedestrian Crashes



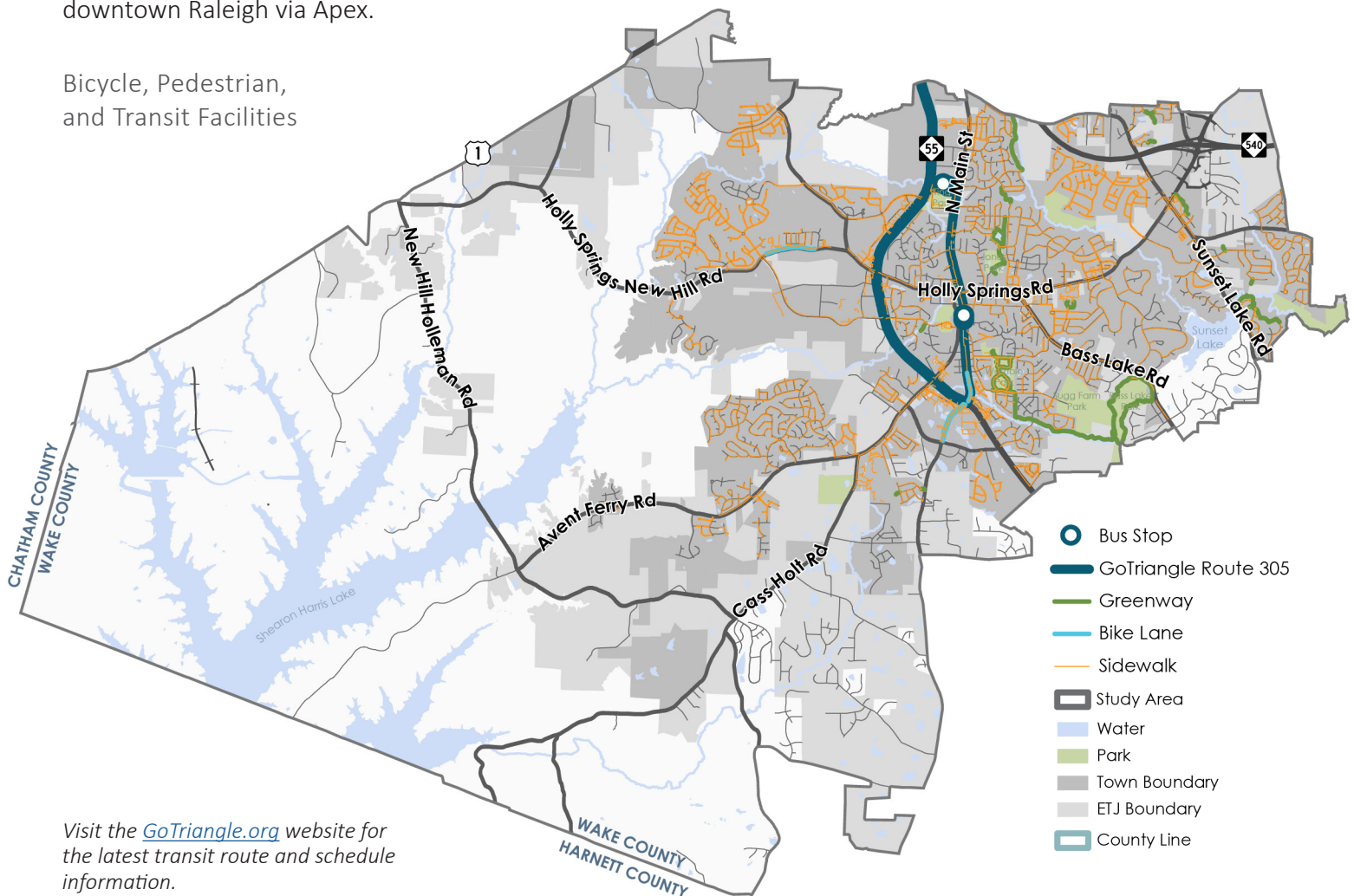
NCDOT Bike and Pedestrian Crashes (2007-2019)

Active Transportation and Transit

Planning for the future of Holly Springs incorporates a holistic view of transportation including multiple modes of travel and a variety of trip types. Priorities for the Town must be considered when planning a cohesive bicycle and pedestrian network. Holly Springs has taken significant strides in investing in active transportation. The recently completed Parks, Recreation and Greenways Master Plan establishes a strategic approach for Holly Springs' investment in safe and connected facilities for all ages and abilities. Additionally, the Town's efforts and partnership with the development community has allowed for an expansive sidewalk network of nearly 185 linear miles. The on-street bicycle network is more limited; however, recommendations outlined in Chapter 3.2 place a priority on filling gaps and expanding the multimodal network through complete streets design.

At its best, transit provides an efficient and inexpensive transportation mode for persons making the traditional suburban-to-urban commute and those traveling between key activity centers. It is important that public transit service remain a viable, efficient mobility option for those who need it most—senior citizens, the physically or economically disadvantaged, and other patrons who choose to ride. Holly Springs residents have limited options when it comes to public transit. With funding from Wake County, GoTriangle operates transit Route 305 during peak hours with service from Holly Springs' Downtown Village District and Ting Park, with connections to downtown Raleigh via Apex.

Bicycle, Pedestrian, and Transit Facilities



GoTriangle

