

## NORTH CAROLINA

Department of Transportation



# NC MOVES <sup>2050</sup>

Drivers and Opportunities

Demographics

March 2019

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# EXECUTIVE SUMMARY

# NC2050 Plan Drivers and Opportunities

## Key Questions to Ask Ourselves

- Will the state's population growth continue at the current rates and for how long? How will the demographic profile of people living in the state change?
- Will the growth remain in urbanized areas or could it shift elsewhere in the state? How will this affect interactions among urban and rural regions in North Carolina?
- What changes will occur in the number, size, and nature of households? Will these changes lead citizens to expect and support a more multi-modal transportation system?



Charlotte, N.C.



# INTRODUCTION

# How this Paper Links to NC Moves 2050

This paper discusses trends in population growth, demographic characteristics such as age and household size and type, and emerging issues such as housing affordability. These, along with the location and design of new development, will significantly impact the state's transportation needs over the coming years. Understanding the influence of these factors will help the state anticipate future levels and types of investments needed for the transportation system.

This paper also outlines certain disruptors such as the opioid crisis, extreme weather events and immigration policies, which could require different strategies from those associated with current trends. These considerations can be used to construct alternative scenarios in later stages of NC Moves 2050.

Finally, this paper identifies the opportunity to make continued progress toward a more multimodal transportation system because of particular demographic changes and anticipated development trends.



# WHERE ARE WE TODAY?

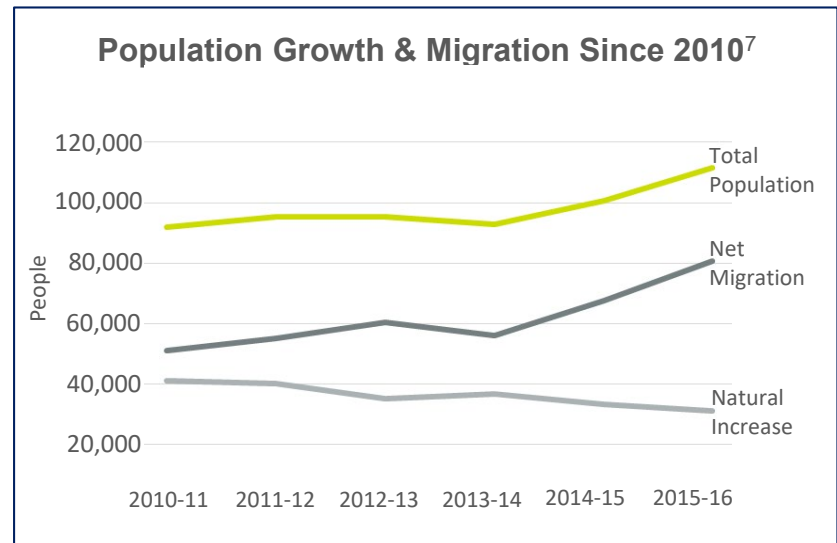
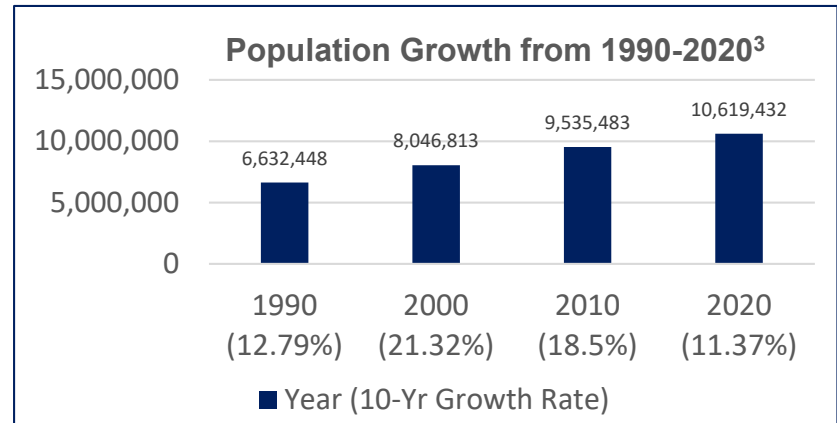
# Explosive Growth in the State

North Carolina has been a leader in the South's explosive growth, adding nearly 30 percent to its population since 2000<sup>9</sup>. At 10.3 million residents, North Carolina is currently the 9<sup>th</sup> most populous state.<sup>7</sup> The dramatic increase in population has added to the state's roadway congestion, particularly in metro areas that have experienced most of the new growth.

### Most of this growth has been "imported."

Nearly two-thirds of new residents since 2010 have relocated from other states or abroad<sup>7</sup>. A large proportion are young adults drawn by the state's universities, military installations and vibrant job market. This youthful influx may have somewhat tempered North Carolina's experience of the national trend toward an aging population. However, the state is also becoming a magnet for retirees, particularly in coastal and western counties.

Natural population increase (i.e., children born to current residents) has been on the decline. That trend will likely continue as the average age of North Carolina's population increases and fewer women are in their childbearing years.





# Growth Patterns Heavily Favor Metro Areas

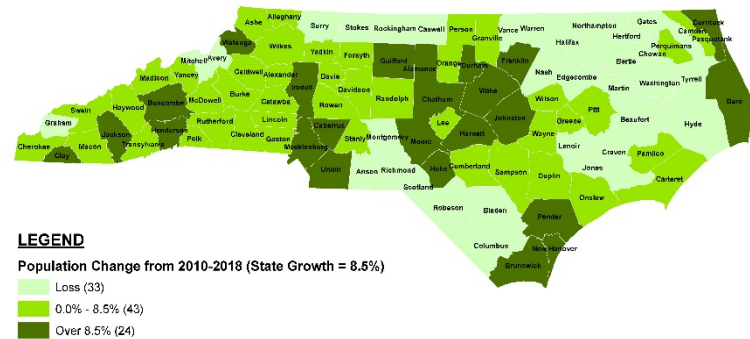
In this decade, almost 60 percent of population growth occurred in 6 counties: Wake, Durham, Forsyth, Guilford, Mecklenburg and New Hanover.<sup>3</sup>

North Carolina is part of the national trend – accelerated by the Great Recession – in which growth is occurring primarily in metropolitan areas. Metro regions are not only attracting the lion’s share of newcomers, they are also continuing to draw residents from smaller cities and rural communities within the state.<sup>A</sup>

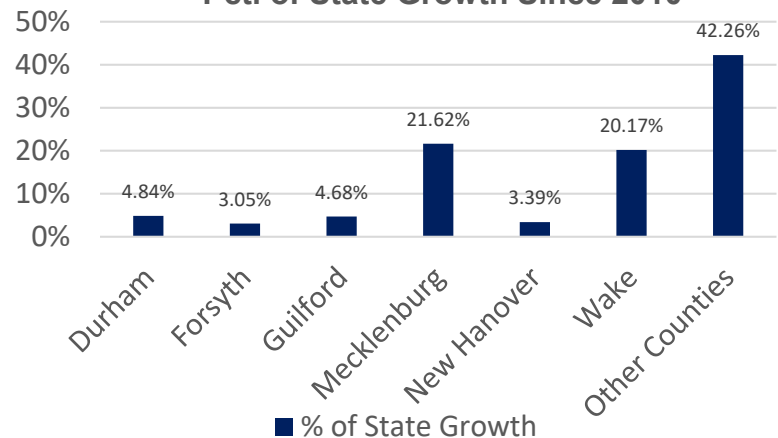
This has created a dynamic in which the population growth is increasingly concentrated in certain locations, creating new infrastructure demands and leaving many rural areas so sparsely populated that communities struggle with resources to maintain the infrastructure they currently have. (More than 40 percent of the state’s municipalities have lost population since 2010, many of them located outside fast-growing metro regions.<sup>3</sup>) As this gulf widens, the state will be faced with mounting needs in both rural and urban areas.

Within metro areas themselves, newer suburban communities are capturing a high share of growth, particularly in the Charlotte and Triangle regions.<sup>8</sup>

Population Change by County 2010-2018<sup>4</sup>



Pct. of State Growth Since 2010<sup>3</sup>



# Growth Has Increased the State's Diversity

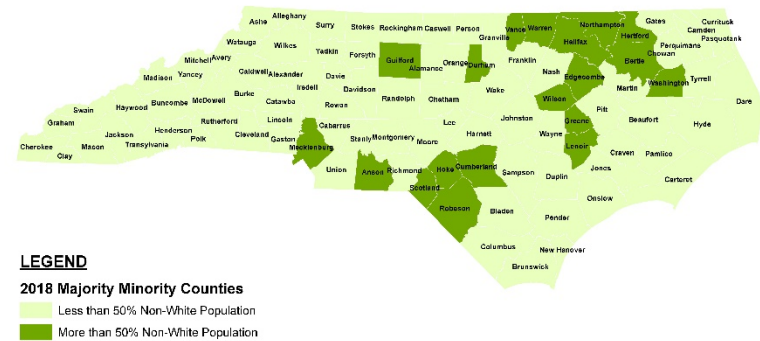
The state is becoming more ethnically and racially diverse. <sup>ABC</sup>

19 counties are now “majority minority,” meaning non-white and Hispanic persons comprise the largest percentage of the population. Statewide, the non-white and Hispanic population is now at about 40 percent.<sup>5</sup>

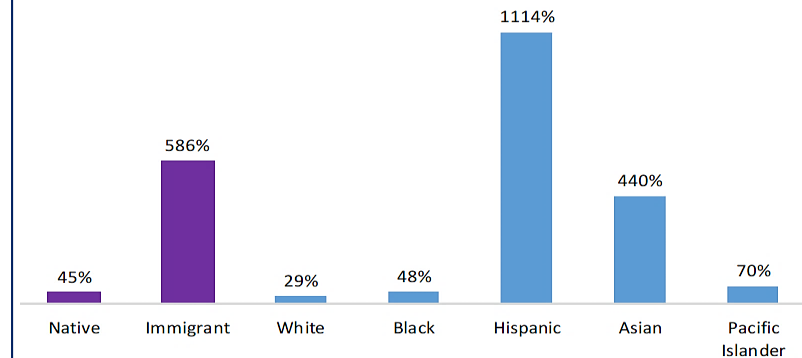
As previously mentioned, new residents moving to North Carolina from other areas have been the largest source of the state’s population growth for many years. Demographic experts note that foreign immigration has contributed significantly to the state’s workforce in the research and technology sectors, as well as in manufacturing and agriculture.

Experts point to the growth in North Carolina’s Hispanic population as particularly notable, increasing by more than a factor of ten since 1990.<sup>7</sup> Almost a quarter of the state’s counties now have a Hispanic population greater than 10 percent. Three counties – Duplin, Lee and Sampson – have Hispanic populations that exceed the national average of 17.8 percent.<sup>3</sup>

Majority Minority Counties in 2018<sup>5</sup>



Population Growth Rate by Nativity, Race & Ethnicity 1990-2016<sup>7</sup>



Graph reflects % increase in population from 1990 to 2016.

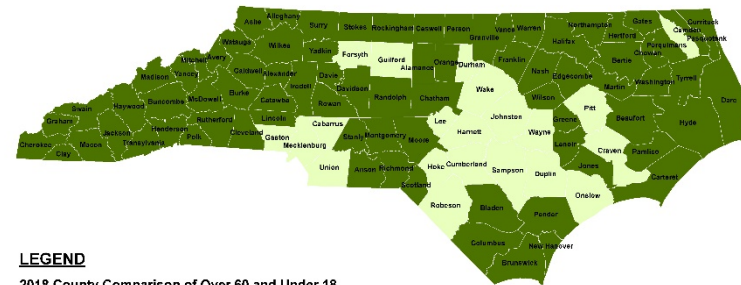
# Aging of the State's Population

**Adding to the growing number of senior citizens is a wave of retirees moving to the state.<sup>10</sup>**

Like the rest of the country, the average age of North Carolina's population is increasing as Baby Boomers reach retirement. <sup>A</sup> In addition to this natural "graying," the state is attracting new retirees. Many of those age 60 and older moving to the state are settling in metro areas, including Raleigh, Charlotte, Asheville, Greensboro and Wilmington.<sup>10</sup> However, rural counties are experiencing a more significant increase in the average age of their populations because workforce-aged adults are continuing to leave for better job prospects, while those who are retired remain where they are.

The majority of counties now have populations with more people over the age of 60 than people 17 and younger.<sup>4</sup> The challenge will be to provide continued mobility for citizens as they age, especially in rural areas. Paratransit is relatively expensive to operate in any area, compared to fixed-route transit, but is particularly costly in rural areas where residents may live long distances from the services that they need.

**Counties with More Persons Over 60 Than Under 18<sup>10</sup>**



**LEGEND**  
 2018 County Comparison of Over 60 and Under 18  
 Light Green: More Under 18 Than Over 60  
 Dark Green: More Over 60 Than Under 18

**In-Migration for Individuals Over 60 from 2012-16<sup>10</sup>**

	Moved from other states	Moved from abroad	Total
North Carolina	32,600	4,504	37,104
Wake	3,318	874	4,192
Mecklenburg	2,849	613	3,462
Brunswick	2,016	46	2,062
Buncombe	1,681	114	1,795
Guilford	1,149	199	1,348
Henderson	1,147	127	1,274

# The “Typical” Household is Changing

## Economic and social changes are reshaping households. <sup>c</sup>

In the wake of the Great Recession that began in 2008, many young adults began postponing the decision to start a family and remained living in one or two-person households. The growing number of empty nesters and retirees is also contributing to a smaller average household size. These smaller households may have different housing needs and their choices are less influenced by traditional factors such as schools.

Many North Carolina households are becoming multi-generational. Demographic experts note that the opioid crisis and other issues have led to the absence of parents or their inability to lead a household. More than 100,000 of the state’s households are headed by grandparents responsible for raising their grandchildren. Depending on the grandparents’ age, these may be households in which no one is currently working, may have limited or no access to a vehicle, or may have mobility limitations that prevent them from driving. The demand for public transportation is significantly greater in these old/young households.



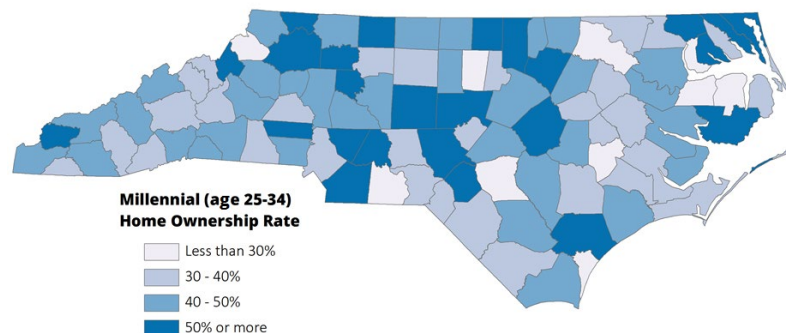
# The “Typical” Household is Changing

Homeownership rates for young adults in North Carolina are also in decline, dropping by 15 percent between 2000 and 2014. Without the need to sell a house in conjunction with a move, these citizens may change their addresses more often than previous generations, potentially making it more difficult to anticipate the level of demand for services and infrastructure in a given area.

Meanwhile, the state added more than 88,000 vacation homes since 2000 and now ranks 7<sup>th</sup> nationally for the number of seasonal units<sup>7</sup>. By definition, most of these homes are either occupied only part of the year, or may be operated as short-term rentals (e.g. Airbnb), meaning that a different household (and household type) may be occupying the unit every weekend.

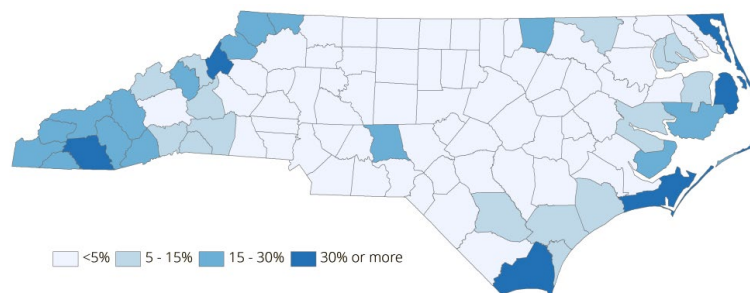
Either case makes it more complicated to predict the level, timing and nature of travel demand on the surrounding transportation system. In the case of seasonal use, the community may expect the transportation system to be improved so that it meets peak demand, but that capacity then goes unused for the remainder of the year. In an era when budgets are tight, these are challenging expectations to meet.

## Home Ownership in Young Adults (2010-2014)<sup>7</sup>



*Young Adult is defined as individuals aged 25-34*

## County Share of Seasonal Housing Units 2010<sup>7</sup>



# WHERE WE ARE GOING

# Growth Continues, at a More Moderate Rate

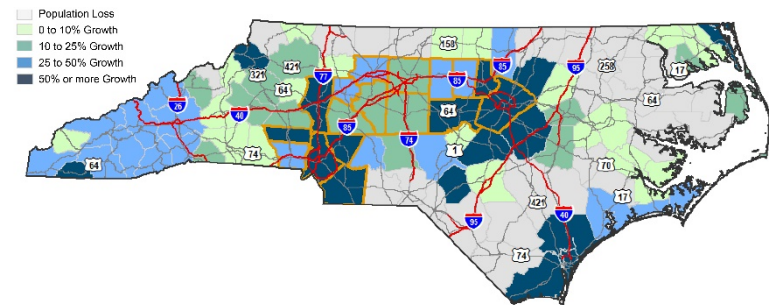
**North Carolina will continue to experience population growth, due largely to net migration, at least in the short-term.** <sup>AB</sup>

The state projects 2 million more people by 2037, and another 2 million estimated by 2050<sup>11</sup>. Growth remains strong compared to other parts of the U.S. However, the annual rate is below 1 percent, much less than the breakneck pace of earlier decades.<sup>3</sup>

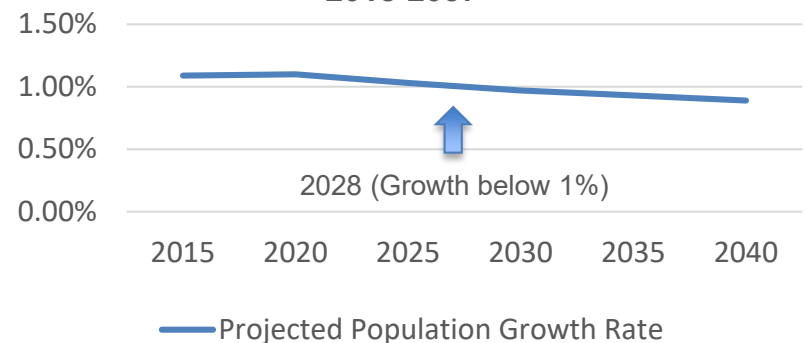
More than 80% of this growth, at least in the first decade, will be due to net migration, i.e. much greater number of people moving into the state compared to the number moving out.<sup>9</sup> As previously noted, foreign immigration has been an important component of the state's growth. Evolving attitudes and changes in national immigration policy could therefore significantly affect North Carolina's ability to maintain and grow its workforce.

Slower population growth could allow the state to catch up on some of its most pressing roadway capacity needs. However, slowed economic growth could also reduce the level of resources available to the state for transportation investments.

**Projected Population Growth Through 2050<sup>3</sup>**



**Projected Population Growth Rate, 2018-2037<sup>5</sup>**



# Metro Areas Continue to Absorb Most Growth

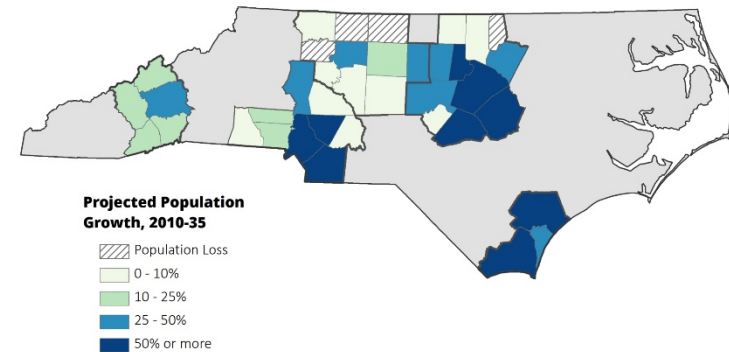
The Triangle and Charlotte regions are projected to attract more than two-thirds of the state's growth over the next two decades.<sup>8</sup>

Absent some major social or economic shift, only 25 counties will capture more than 95% of the people moving to the state. Based on county-level projections, the boom will continue in major metro areas, while rural areas experience flat or negative growth.

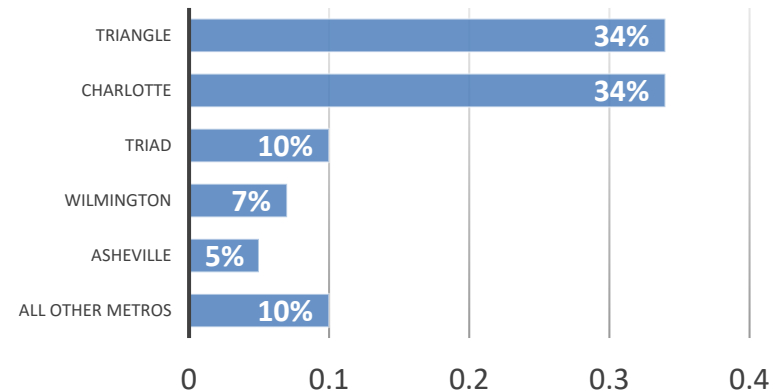
In the most pessimistic scenario, rural and urban areas could be pitted against each other in competition for state transportation funds. Urban areas would likely be calling for new and expanded roadways, high-capacity transit, and "smart mobility" investments. Rural areas would likely have an increased need for paratransit services but might also call for new and expanded roads because four-lane highways have traditionally been seen as an industrial recruitment tool.

With an economic imbalance, the ability of local governments to fund maintenance or match federal funds will also vary widely among regions. This could make it challenging for the state to apply consistent policies statewide, while still ensuring that citizens' needs are equitably met across the state.

Fastest Growing Metro Counties (2010-2035)<sup>8</sup>



Projected Share of State Growth, 2010-2035)<sup>8</sup>





# A Small Number of Counties Will Get Much Denser

With metro areas expected to absorb most newcomers, urban counties will become more dense.<sup>4</sup>

As defined by the NC Rural Center:

- “Urban” counties have at least 750 people per square mile;
- “Suburban” counties have between 250 and 750 people per square mile;
- “Rural” counties have fewer than 250 people per square mile.

By 2050, the state will gain only one additional urban county (Cabarrus, which is now suburban). Counties newly classified as suburban will include Watauga, as well as Onslow, Wayne and Harnett, which are nearly at suburban densities now.<sup>3</sup>

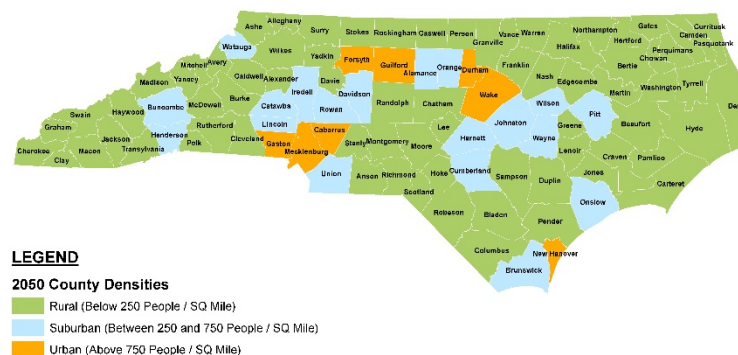
Counties expected to undergo the greatest change in density include:

- Wake and Mecklenburg, which will both have more than 1.8 million residents;
- Brunswick, Chatham, Hoke and Johnston

Mecklenburg will be the densest county, with over 3,000 people per square mile.



## 2050 Urban, Suburban, and Rural Counties<sup>3</sup>



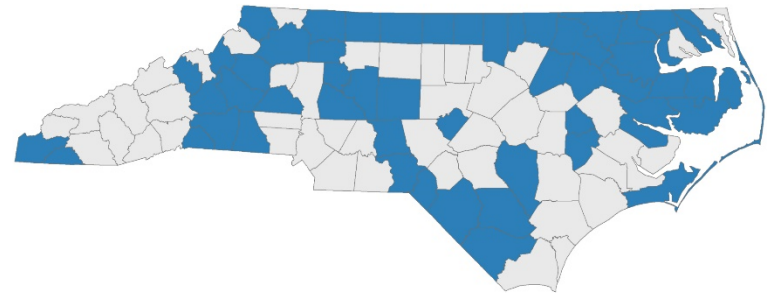
# The State Continues to Age and Diversify

In the next two decades, the state's population will continue to become more diverse. Another 10 counties will reach majority minority status, including the urban counties of Durham, Forsyth, Guilford and Mecklenburg.<sup>5</sup>

Within 15 years, more than 1 in 5 North Carolina residents will be 65 or older. Although a growing number of seniors are remaining in the workforce, the overall number of prime working age adults (35 to 64) is expected to decline in more than half of our counties.<sup>10</sup> Many of these households will have less discretionary income, which will greatly impact rural economies that may already be struggling.

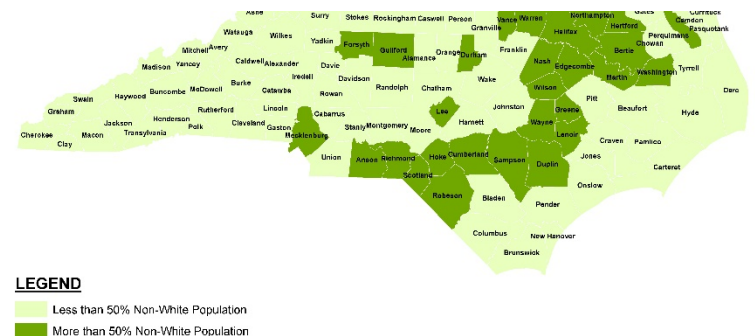
Also significant is the number of “super-senior citizens” (those 85 and older), who often have greater human services needs. That subset of the population will double over the next two decades.<sup>3</sup> Many will live in rural areas and will likely need either to relocate or have in-home services provided. Medical care for super-seniors in rural areas could require long trips which will be provided by public transportation, since many of these households will have limited income.

## Counties (53) Projected to Have Fewer Prime Working Age Adults than Today by 2035<sup>7</sup>



*Prime Working Age Adult is defined as individuals aged 35-64*

## Majority Minority Counties in 2037<sup>5</sup>



# Housing Costs and Demand Continue to Soar

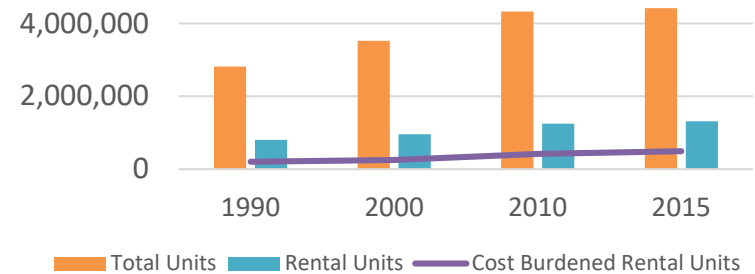
## Demand for affordable housing will increase across much of the state.

With more than 2 million new households expected, and so many of them in metro areas, there will be intense demand and competition for housing. It is now common for North Carolina households to spend more than 30 percent of their monthly budget on housing costs. This represents a major challenge in saving for a down payment, increasing the likelihood that some residents will never become homeowners.

Even in areas with less competition for housing, available housing stock may not be a good match for tomorrow's households. Average household size will likely shrink, as more adults choose to delay or forego marriage and other households become empty nesters.

Many adults are also carrying heavy student loan debt or assuming responsibility for aging parents. Paying for auto insurance, fuel and maintenance on more than one vehicle may be challenging for these households. They are also highly vulnerable to rising fuel prices or changing development patterns that require long commutes.

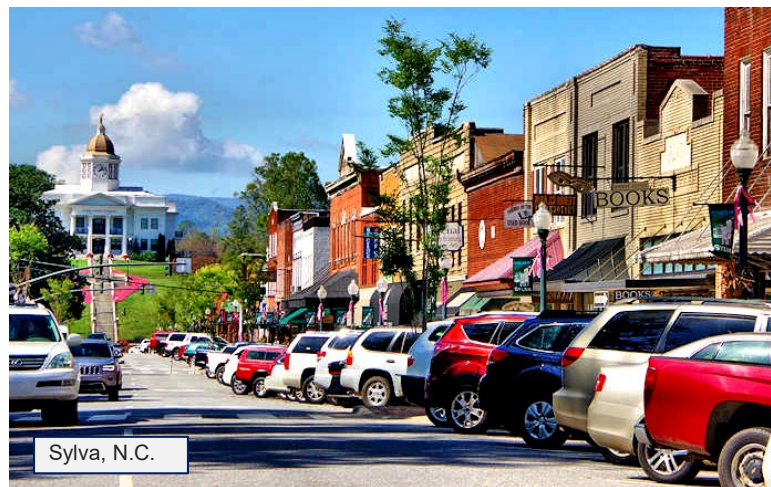
## Cost Burdened Rental Units<sup>3</sup>



# FINDINGS AND FUTURE DIRECTION FOR NORTH CAROLINA

# Planning Considerations

- **Rising sea levels and increased extreme weather** could dramatically alter the distribution of people across the state, forcing people inward from coastal areas.
- If natural increase no longer drives population growth, then economic opportunity and quality of life become even more important in determining where people live. The state will need a clear understanding of **how its transportation investment decisions affect regional economies**. As noted, four-lane roads have long been viewed as a stimulus for economic development in rural areas. As the nature of the economy evolves, that assumption may need to be re-examined. If that is no longer the answer, what transportation investments will help rural areas?
- If **growth continues to concentrate in metropolitan areas** at the predicted rates, the transportation system will be greatly impaired without significant investment in transportation management and systems operations, targeted capacity improvements, and increased availability of alternative modes.



# Planning Considerations

- As the state's population ages, **more seniors will need transportation services, yet the state will have fewer working-age adults to support the budget** needed to provide transportation services. It may be possible to identify the most common types of trips and less costly ways to meet those public needs. For example, telemedicine may allow rural residents to consult with specialists simply by traveling to the nearest rural hospital.
- **Current development patterns across much of North Carolina are not transit supportive.** Jobs, shopping and housing are often spread far apart and the roads connecting them lack sidewalks and bicycling facilities. North Carolina has taken significant strides toward Complete Streets and adapted standard designs to be more transit friendly. Continued support for these policies, as well as funding to retrofit corridors where feasible, can improve citizens' future safety and mobility.



Inlet Created on Hatteras Island, N.C. during Hurricane Isabel in 2003



Sylva, N.C.

U.S. Highway 47

# Planning Opportunities

The socioeconomic trends identified in this paper may improve the environment for alternative modes, at least in metro areas, in the following ways:

- Residents struggling with rising housing costs and debt may be more open to using alternative modes as a way to reduce transportation costs;
- Many new residents have lived in other states where they had positive experiences with public transit;
- A growing concern for health is driving greater public demand for walking and bicycling facilities;
- Smaller household sizes (and affordability concerns) may create demand for smaller, more closely spaced homes – which are more efficient for transit as well as non-motorized trips;
- Many people moving to metro areas are young adults, a group which currently has a lower rate of auto ownership than previous generations. Although data is mixed on how much of this is driven by economics versus personal preference, it is a trend for transportation planners to watch.



# APPENDICES



# Appendices

## DOCUMENTS:

1. [Beyond Traffic 2045](#)
2. [Foresight NCHRP Report 750 Series: Volume 6 – The Effects of Socio-Demographics on Future Travel Demand](#)
3. [2018 Population Estimates \(US Census Bureau\)](#)
4. [Population Dynamics \(NC Office of State Budget & Management\)](#)
5. [Demographic & Economic Analysis Section \(NC Office of State Budget & Management\)](#)
6. [Kenan Institute White Paper: Leveraging North Carolina's Migration Dividend](#)
7. [Carolina Demography \(demography.cpc.unc.edu\)](#)
8. [NC Demographic Trends Through 2035 – Carolina Demography](#)
9. [Six Disruptive Demographics that will Change the US & North Carolina Forever](#)
10. [North Carolina is Aging! North Carolina Division of Aging and Adult Services](#)
11. Developed by the Consultant Team

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