Regional Demographic & Economic Profile

2020 Regional Transportation Plan
4 Regional Demographic and Economic Profile

Understanding Franklin County’s current and future demographic, socioeconomic, and land use patterns are necessary to effectively plan for the region’s transportation needs. Chapter 4 examines in detail the current population and economic conditions of the county in order to determine transportation issues that should be addressed. Chapter 4 also looks to the future and examines projected population and job growth with the intent of anticipating future transportation needs.

Franklin County is the most rural county in Massachusetts. It is located in the northernmost portion of the Connecticut River Valley of western Massachusetts. Franklin County borders Vermont and New Hampshire and the Massachusetts counties of Berkshire, Hampshire, and Worcester.

Franklin County has a population of 70,926¹ and a population density of 98 people per square mile in its 725 square mile area. The majority of the twenty-six towns in the county are very small – averaging approximately 1,400 residents. The largest municipality, and only city, is Greenfield with a population of 17,474 people. The smallest populated municipality is the Monroe with a population of 86. Ninety percent of the housing stock in Franklin County is occupied, of which 70% is in the form of single-family homes. The landscape in Franklin County is predominately open space, forest, and farmland. The soils in the Connecticut River Valley are ideal for agricultural uses, and consequently, the region has a rich agricultural history.

Regional Demographics
Population
To better assess the transportation needs of the region, it is necessary to understand how the population in Franklin County is changing. Between 1970² and 2000, the county’s population grew by 21%, an increase of 12,300 people. Much of this growth took place during the 1970’s and 1980’s. Following the trend of slower growth that began in the

¹ Unless otherwise noted, all socio-economic demographic data is from the U.S. Census Bureau, 2017 American Community Survey, Five-Year (2013-2017) Estimates Program.
² U.S. Census Bureau, total populations from decennial Census surveys.
1990’s, the county’s population slightly declined between 2000 and 2010, with a population loss of 163 (a decline rate of -0.2%). Table 4-1 illustrates the estimated population change in Franklin County and surrounding counties in this decade. Franklin County and the counties to the west and north have lost population, with counties to the south and east moderately gaining population.

Table 4-1: Total Population for Franklin County and Surrounding Counties, 2010 to 2017

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<tr>
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</thead>
<tbody>
<tr>
<td>Franklin County, MA</td>
<td>71,372</td>
<td>70,926</td>
<td>-446</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Berkshire County, MA</td>
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<td>Hampshire County, MA</td>
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<td>161,197</td>
<td>3,117</td>
<td>2.0%</td>
</tr>
<tr>
<td>Worcester County, MA</td>
<td>798,552</td>
<td>818,249</td>
<td>19,697</td>
<td>2.5%</td>
</tr>
<tr>
<td>Cheshire County, NH</td>
<td>77,117</td>
<td>75,960</td>
<td>-1,157</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Windham County, VT</td>
<td>44,513</td>
<td>42,869</td>
<td>-1,644</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>6,547,629</td>
<td>6,789,319</td>
<td>241,690</td>
<td>3.7%</td>
</tr>
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Map 4-1: Population Change for Franklin County and Surrounding Counties, 2010 to 2017
The population growth that occurred between 2010 and 2017 took place in towns scattered throughout Franklin County without a very clear geographic pattern. The top five towns which experienced the most growth are: Leverett, Gill, Hawley, Heath and Bernardston. Two of these towns are among the lowest populated in western Franklin County and have under 1,000 people. The other towns are either in the southeastern quadrant of the region or have easy access to I-91. The majority of towns that lost population during this time period are located in west County.

**Age Distribution of the Population**

For transportation planning, it is important to know not only the size of a region’s population, but also its composition by age group and how that may change over time. As people age, their use of the transportation network tends to change. For example, the elderly are less likely to drive by themselves and are more likely to use public transit or find other alternatives. In addition, the number of adult workers in a region affects peak traffic volumes as they commute to their workplaces. Like much of the nation, Franklin County is getting older as the “Baby Boomer” generation ages. Half (51%) of the Franklin County population is currently aged 45 and older. Of that age group, nearly a third (32%) is aged 45 to 54 years old, and 19% is aged 65 years and older.

The region is expected to see a significant increase in the number of elderly residents over time. The older “Baby Boomer” generation (born 1946 to 1964) has begun reaching their early 70s and will reach 75 years old in 2021. Studies have shown that nationally, over 40% of people age 75 and above are either non-drivers or have limited their driving. As a result, it will be important to provide transportation services, including public transit and paratransit/van services for Franklin County’s expanding elderly population.

Other age groups of interest for transportation planning are 25 to 44 years old and 45 to 65 years old. These age groups comprise the bulk of the workforce and typically make their trips to and from work during the peak morning and evening commute hours. In 2017, 86% of Franklin County residents are estimated to commute to work by car (with 77% driving alone and 9% carpooling), 4% walked, 2% took public transportation, and 1% took other means. Traffic congestion during commuting hours can be addressed in part through provision and promotion of healthy transportation options to single occupancy vehicle travel for work commutes. Options could include the use of park and ride lots for carpooling or transit, ridesharing programs, and bicycle and pedestrian facilities. Congestion can also be influenced through flexible work schedules and through the provision of telecommunications

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Regional Demographic and Economic Profile

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infrastructure that helps support residents who work from their homes. In 2017, approximately 7% of Franklin County residents worked at home.

**Ethnic and Racial Diversity**

Franklin County is the least racially and ethnically diverse county in the Commonwealth. As of 2017, the U.S. Census Bureau estimated that 94% of the population in the county is White, with 91% of the population being White and not Hispanic or Latino. This is compared to a Massachusetts percentage of 79% that is White, and 73% being White and not Hispanic or Latino. The next largest populations by a single race are Asian (1.6%) and Black or African American (1.4%), and a very small percentage (0.2%) that is Native American/Alaska Native. The population of people of two or more races is 2.5% in Franklin County. The population of Hispanic or Latino ethnicity is the largest minority in Franklin County at 3.8%. Over the years, the Hispanic and Latino population has increased from 2% of the total population in 2000, to 3.2% in 2010, and now 3.8%.

**Population Projections to 2040**

The demographic data presented shows that the Franklin County population size is relatively stable, is gradually getting older, and its racial and ethnic composition is only slightly changing. It is also important to look ahead and forecast how the population may change in the future in order to meet the shifting demands of the region. As part of this effort, MassDOT, in partnership with the UMass Donahue Institute, has developed socio-economic forecasts for all regions of the Commonwealth, including Franklin County, to the year 2040. Those forecasts have also been applied to the twenty-six municipalities in the county. In general, the MassDOT forecasts show that the next twenty-five years will be a period of moderate growth for the Commonwealth as a whole. Massachusetts is projected to grow at 12.7% between 2010 and 2040 with some places increasing more rapidly and some losing population. During this same time, Franklin County is projected to lose 2.7% of its total population, decreasing to 69,477 people by the year 2040. The total population loss for the county over this thirty year timeframe is approximately 1,895 people. This population loss can largely be attributed to the aging of the large Baby Boomer group and fewer births to replace their loss. There is also very little immigration projected to occur in Franklin County to make up for this population loss, which is the driving force of much of the state’s growth. Figure 4-1 shows the projected change in the Franklin County population in relation to the

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4 According to the U.S. Census Bureau definition, Hispanic or Latino origin is an ethnicity that can be from any race or races.

5 The FRCOG provided input based on local conditions that the projection methodology for municipal forecasts may not take into consideration, as prepared by MassDOT with the UMass Donahue Institute (UMDI).
county’s past population growth since 1980. The projected population loss emphasizes the RTP goal of continued maintenance of the transportation system rather than expanding it.

![Figure 4-1: Past and Projected Franklin County Population, 1980 to 2040](image)


**Income and Employment Profile**

**Income and Wealth**

The income levels of a community often indicate the potential transportation needs of a region. Areas with lower-income populations tend to benefit more from the existence of public transportation because the costs associated with using public transportation are less than the costs of owning and maintaining a car. In addition, low income households often do not have the resources needed to cope with rising fuel costs, such as moving closer to work or purchasing a more fuel-efficient vehicle.⁶

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In general, U.S. Census data shows that Franklin County’s incomes are much lower than Massachusetts as a whole. In 2017, the county’s median household income was $57,307, which was much less (23% less) than Massachusetts’s median household income of $74,167. Another income indicator is per capita income. By this measure, Franklin County’s income is still 17% lower than the Commonwealth’s. Franklin County’s per capita income is $33,010, compared to the Massachusetts per capita income of $39,913.

The lower per capita and median income figures for Franklin County in part reflect the lower average salaries and lower costs of living in western Massachusetts compared to Boston and other eastern Massachusetts communities. However, these statistics also reflect economic challenges within the region. These challenges include the loss of a historic manufacturing employment base. As numerous jobs have left Franklin County, they have often not been replaced by comparable employment opportunities with good wages and benefits, which have resulted in lower incomes in the region.

In 2017, the poverty rate for Franklin County was 10.9%, which was slightly lower than the state rate of 11.1%. The areas experiencing higher poverty rates than the state average include several of the downtowns and village centers that had once been traditional hubs of manufacturing employment, such as Montague (15.2%) and Greenfield (13.2%). Other areas with higher poverty rates include the small towns located farther from major employment centers, such as the towns of Wendell (17.6%), Charlemont (16.1%), Heath
(15.2%), and Colrain (13.5%), and communities with a higher concentration college students, such as Sunderland (16.4%) and Shutesbury (11.3%).

**Employment**

Regional employment trends reflect both the condition of the national and regional economy and changes in the region’s population. When employment opportunities are created in a region, people are likely to move there. Similarly, when jobs in a region are lost, there is typically an out-migration of residents. To understand long-range transportation trends and commuting patterns, it is important to understand the size of an area’s labor force and its employment level. An area’s labor force is defined as the number of residents age 16 or over who are currently employed or who are actively searching for work. Persons not actively seeking employment, such as enrolled students, retirees or stay-at-home parents, are excluded from the labor force figures. The unemployment rate describes the percentage of people in the labor force who are not employed (part-time or full-time) during a certain period and who are actively seeking work.

**Labor Force**

According to the Massachusetts Executive Office of Labor and Workforce Development (EOLWD), the size of Franklin County’s labor force has fluctuated over the past decade. The labor force grew throughout the early 2000s and then began to decrease starting in 2007 due to the Great Recession. By 2010 and the introduction of American Recovery and Reinvestment Act programs policies to catalyze the economy, the size of the Franklin County labor force grew to greater than pre-recession levels and the number of employed increased greatly. Starting in 2014, the county’s level of total employment began to grow consistently from year to year to the highest employment level in twenty years. Figure 4-2 shows the changes in the region’s labor force and employment levels from 2006 to 2018.
Predictably, the largest town labor forces in Franklin County are located in the most populated communities. Greenfield contains 25% of the county’s population and accounts for 24% of the labor force for Franklin County. Together, the four largest towns in the region (Greenfield, Montague, Orange, and Deerfield) comprise 54% of Franklin County’s total population and 51% of the county’s labor force.

In 2018, Franklin County’s unemployment rate of 3.0% was lower than the State (3.3%). Among the individual towns, the unemployment rate can vary greatly. Several towns have consistently experienced higher rates of unemployment than the State rate. In 2018, seven towns had rates above the State rate. Typically, towns with the highest unemployment rates fall into two types of categories: 1) isolated hill towns and 2) downtowns and village centers that had been traditional hubs of manufacturing employment. The towns of Monroe (3.8%), Charlemont (3.6%), Rowe (3.6%) and Wendell (3.5%) have higher unemployment rates than other Franklin County towns and the state, and are located in the more rural areas of the county. The population centers of Orange (4.6%) and Montague (3.8%) are also sites of higher unemployment. Erving and Bernardston also had unemployment rates above (3.4%) or at the state rate (3.3%) respectively. Another factor contributing to a town’s higher unemployment rate would be the closure of a nearby major employer, such facility closures are described in the section on major employers.
It should be noted that unemployment figures do not distinguish between full or part-time employment and obscure the fact that underemployment is a significant problem for the region. Figure 4-3 shows the change in unemployment in Franklin County between the years 2006 to 2018, which includes the period of the Great Recession.

![Figure 4-4: Unemployment Rates at the Franklin County and State Levels, 2006 to 2018](image)

Source: MA Executive Office of Labor and Workforce Development, Local Area Unemployment Statistics.

Although the unemployed are not commuting to jobs, they are often traveling for employment interviews and training. Unemployed residents can greatly benefit from support services, including transit services, which can help them access, obtain, and keep good jobs. Without adequate public transportation options, it can be difficult for potential workers who do not have the use of a vehicle to access and maintain quality employment. Assisting low-income residents with transportation to work, training, and educational opportunities that can improve their employment options, is a major focus of the transit network in Franklin County and of proposed transit service improvements. Chapter 9, “Transit and Paratransit Services,” describes in detail the transit network and its various existing services and recommended additions.

The U.S. Census Bureau collects data on the “class of workers”, which describes the sector a resident is employed in, such as private business, non-profit, government, self-employed, and unpaid family workers. The percentage of workers who are self-employed in Franklin County, either in an incorporated or unincorporated business, is higher in Franklin County.
(12%) than the State (9%). According to 2017 data, there are 4,653 workers who are self-employed.

**Major Employers**

There are 38 employers in the region that are identified as having at least 100 employees. These employers include private businesses, non-profit organizations and governmental entities (such as public schools). Most of the major employers are located in the county’s primary employment centers, including Deerfield, Greenfield, Orange, and Whately. Yankee Candle Company, which has its headquarters and a large retail store in South Deerfield and manufacturing facility in Whately, is the largest employer in Franklin County with more than 1,000 employees. The next largest employers are Pelican Products Inc. in South Deerfield, and Seaman Warehouse in Orange, with over 500 employees each. Employers with 250 employees include the region’s largest medical facilities, Baystate Franklin Medical Center in Greenfield and Farren Care Center in Montague, and private educational institutions, Deerfield Academy in Deerfield and Northfield Mt. Hermon School in Gill. The other employer identified as having 250 or more employees is the Walmart Supercenter in Orange.

The U.S. Census Bureau offers data on commuting patterns of workers through the Longitudinal Employer-Household Dynamics program. In 2015, it estimated that 40.9% of the 33,615 residents of Franklin County who were employed, worked at jobs located in Franklin County. Of the workers who were employed outside of Franklin County, 27% of them commuted to jobs in Hampshire County, with the next most frequent destinations being Hampden County (18%) and Worcester County (16%). The largest single employer of Franklin County residents is the University of Massachusetts at Amherst. The most recent data available shows that in 2002, UMass Amherst estimated that it employed 1,250 Franklin County residents (not including student employees). UMass Amherst has a total of approximately 5,300 non-student staff and faculty members.

The closure or downsizing of major employers in the region has had a variety of impacts on the regional economy and on residents. These events have had a negative impact on employment levels and incomes, and at times have contributed to the out-migration of the traditional working age populations.
Just to the north of Franklin County, the Vermont Yankee Nuclear Power Station (VY) in Vernon, VT, ceased all operations at the end of December, 2014. At the time operations ceased, the plant had 550 employees, of which 101 (or 18%) lived in Franklin County. These employees, many of whom had specialized skills to operate and manage the power plant, had relatively high wage and salary levels – much higher than the average regional income. Job levels at the plant have steadily declined since operations have ceased. The transfer of spent fuel into dry cask storage in 2018 was done by a contracting firm from outside the region. The current staffing level is approximately 60 employees, including security personnel. Once the decommissioning process begins, about 100 to 150 specialized workers from outside the region will conduct the work. Once decommissioning is complete, approximately 10 to 15 security personnel will remain at the site.

The closure of the VY was the largest employment loss in recent years, however, other facilities closures have also impacted the region. The closure of two manufacturing companies also created job losses. The Rodney Hunt Company located in Downtown Orange closed in 2016 which resulted in a loss of over 200 jobs, and the Turners Falls Paper Company in located in Downtown Turners Falls closed in 2017 which resulted in the loss of approximately 60 jobs. In spring 2019, the Channing Bete Company, a publications company, announced it would close by June 2019, resulting in the loss of 105 jobs. Each of these closures leaves behind facilities located in major employment centers that could be reused by other businesses.

Tourism in Franklin County
One growing sector of the region’s economy is the tourism sector. Many of the communities in Franklin County view tourism as a way to enhance their local economies and support local artisans and craftspeople, and also to promote and protect the region’s natural, cultural, and historic resources, including farmland and forestland. It is identified as a key economic cluster in region’s Comprehensive Economic Development Strategy (CEDS) Plan. More information on tourism in the region can be found in Chapter 11: Scenic Byways and Tourism.

Telecommunications Infrastructure Improvements
An important factor in the region’s economy is the availability and efficiency of the telecommunications infrastructure. Telecommunications infrastructure includes systems that provide telephone, television and broadband internet services. In many parts of Franklin County, the services available through the current system are inadequate for

8 The Brattleboro Reformer newspaper, Susan Smallheer, January 11, 2019.
present day needs. Issues of reliability, affordability, and access are significant obstacles for small and large businesses, educational and health care institutions, and households. Fortunately, efforts led by the State and in partnership with local communities are underway and changing the telecom landscape in the region.

In 2014, an open access, fiber-optic, “middle mile” network called MassBroadband 123 was completed by the Massachusetts Broadband Institute using $90 million in state and federal funds. The network connects cities/towns in western and north-central Massachusetts to the global telecom network. The first segment of this middle mile network was constructed along the I-91 corridor and in coordination with MassDOT.

Multiple internet service providers (ISPs) can use this network to offer services to Community Anchor Institutions (CAIs) and other entities with a direct connection to the network. The network’s capacity allows for very high speed transmissions and the use of next-generation applications. It is also the backbone infrastructure used to connect the “last mile” (the local system that connects subscriber homes and businesses) to the global network. Half the towns in Franklin County are unserved by cable television broadband systems. Currently, two of these towns (Leverett and Warwick) have alternative last mile broadband systems in place.

Through the MA Executive Office of Housing & Economic Development’s Last Mile Infrastructure Grant Program, over $50 million of state funds have been committed for last mile infrastructure investment in unserved and underserved communities. Through this program, five towns in Franklin County (Buckland, Conway, Montague, Northfield, and Shelburne) had the existing cable systems expanded to reach 96% of housing units in 2018. Eleven towns have received infrastructure grants, of which nine are for developing fiber-to-the-premise networks, and two are for developing wireless networks. As these networks are completed, improved internet service could attract new residents and employment to Franklin County and promote telecommuting – all of which could affect transportation infrastructure needs.
Employment Projections

Employment projections are useful for transportation planning, because they can help estimate future commute travel flows and help assess the need for transportation services and facilities for work-related travel. As with the population forecasts used in this RTP, the employment forecasts were produced by MassDOT, in partnership with the UMass Donahue Institute. The total employment in an area is equal to the number of employed residents in the area, plus the number of non-residents who commute into that area to work. Excluded from the figure are the residents who commute out of the area to work.

MassDOT provided employment forecasts for the regional and municipal level. The municipal level allocations were performed with the assumption that each town’s share of employment will remain constant over the next twenty-five years. This is based on the premise that primary employment trends are regional and the employment centers in Franklin County today will generally continue to be the employment centers in the county for the foreseeable future. While this is true, it is also likely that the communities within easy
commuting distance to Hampshire County employers will grow over the next twenty-five years and see an increase in their share of the region’s employment. From an employment perspective, the most important population changes are those that occur at the regional level. Population changes for individual towns, especially smaller towns, have only a minor impact on employment since many workers commute to jobs outside of their community.

As shown in Figure 4-5, the forecasts show that Franklin County’s total employment will decline by 4.1% over the next thirty years. The state’s employment is projected to grow by 10.1% over the same time frame. Employment in Franklin County as of 2010 was at 25,684 and is projected to slightly increase by 1.4% by 2020 and then lose 1,433 employees by the year 2040.

The forecasts show that overall Franklin County will lose employment by the year 2040. This is largely due to the graying of the region’s population as they age out of the workforce. Other regions in the state with similarly aged populations are also expected to have declining employment. They include Berkshire County and Cape Cod. In terms of planning for the transportation of commuters in the region, these forecasts seem to indicate that the current highway infrastructure is sufficient for commuters’ needs. The status of the public transit system should be evaluated to ensure that it is serving the workforce efficiently and effectively. In addition, the return of passenger rail to the region should be evaluated as to how it can best serve the area’s labor force as it potentially changes to a more telecommuting/long distance employment model.

Source: MA Executive Office of Labor and Workforce Development; MassDOT and UMDI Employment Projections.
Transportation Profile
Because of Franklin County’s rural character and limited transit services, the county has a high level of private vehicle ownership and most of Franklin County residents rely heavily on their vehicles for travel.

Registered Motor Vehicles
The Massachusetts Registry of Motor Vehicles provides data about the number and type of registered vehicles by town and by year from 1990 to 2015. The figures include vehicles that are registered by individual residents as well as businesses. The types of vehicles include: automobiles, trailers, light trucks, heavy trucks, motorcycles, luxury vehicles, and other vehicles.

According to this dataset, the number of total registered motor vehicles from 1990 to 2010 steadily grew in Franklin County and in Massachusetts overall, with the exception of a slight decline during the Great Recession from 2006 to 2009. This growth in the number of registered vehicles was at a higher rate than the population growth rate. In this period, the number of registered vehicles in Franklin County increased from 54,680 in 1990 to 82,646 in 2010, which is an increase of 51%. During this period, the total county population only grew by 2%. A similar pattern emerges at the state level, from 1990 to 2010 the number of registered vehicles grew by 46%, while the population grew by 9%.

Source: Massachusetts Registry of Motor Vehicles, as provided by the Massachusetts Department of Revenue, Division of Local Services.

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9 Data is not available for select towns in 2013 and 2014, so Franklin County figures could not be calculated for those years.
However, starting in 2011 through to 2015, there has been a steady decline in the total number of registered vehicles in both Franklin County and Massachusetts. From 2010 to 2015, the number of registered vehicles declined by 26% in Franklin County and 24% in Massachusetts. During this period, Franklin County’s population declined by 1% and Massachusetts’ population grew by 4%.

Several factors are considered to contribute to this trend in declining total number of registered motor vehicles. These factors range from demographic trends to shifts in transportation modes. As the largest age group in the country, the Baby Boom generation (born between 1944 and 1964), gets older, they may discontinue driving. It has been reported that the Millennial generation (born between 1981 and 1996) is less likely to own cars and to drive, due to costs and personal preference. In addition, new transportation options may also influence car ownership trends, such as ride-sharing services (like Uber and Lyft), car sharing services (like Zipcar) or public bike-sharing programs in cities. Lastly, public policy and planning efforts to foster more pedestrian and bicycle friendly communities may also influence the likelihood for commuters to choose these options rather than own a car.

![Figure 4-7: Number of Registered Motor Vehicles by Type in Franklin County, 2015](image)

Source: Massachusetts Registry of Motor Vehicles, as provided by the Massachusetts Department of Revenue, Division of Local Services.

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10 Mary Wisniewski, Chicago Tribune, November 12, 2018. “Why Americans, particularly millennials, have fallen out of love with cars.”
Another trend is the shift in the types of vehicles registered in Franklin County. From 2010 to 2015 there was a 17% decline in the number of registered automobiles, a 11% decline in light trucks, 8% decline in heavy trucks, 46% decline in motorcycles, 22% decline in luxury vehicles. However, there was a 119% increase in the number of “other” vehicles. The definition for “other” vehicles is not available, but may include electric vehicles.

**Households Without Cars**

In 2017, 7% of Franklin County households (2,200 households) did not own or have access to a motor vehicle for their transportation needs, compared to 12% of households statewide. The Census figures show that the two population groups that are most likely not to own a car are renter households and older households. An estimated 18% of renter households in Franklin County have no vehicle available. The higher rate of carlessness among renters is related to two primary factors. First, most of Franklin County’s rental housing is located in village and downtown areas that, because of their population density, typically have the highest degree of access to transit services. Secondly, renter households, on average, have lower incomes than homeowners and are more likely not to own a private vehicle because of the costs associated with vehicle ownership. Studies by the Bureau of Transportation Statistics (BTS) and the Surface Transportation Policy Program (STTP) have found that transportation costs are typically the second largest household expense next to housing. Low income households can be particularly burdened by transportation costs, spending a quarter of their income or more, on their travel and private vehicle expenditures. The STPP study found that switching from the use of a private vehicle to transit service can save a family thousands of dollars annually.

The Census data also show that, by age group, households with the head of household age 65 years and over, are more likely not to have a car. In Franklin County, 11% of households led by householders aged 65 or older are carless. Reasons for the higher level of carless households among older seniors include physical limitations, which make driving difficult, and as discussed above, the expense of private vehicle ownership for elderly fixed-income households.

**Commuting Trends**

**Mode of Transportation to Work**

The automobile is the primary mode for commuting travel in Franklin County. In 2017, 86% of Franklin County’s employed residents commuted to work by car; with 77% driving to work alone, and 9% carpooling. In comparison, 71% of Massachusetts commuters drove alone and an additional 7% carpooled. The proportion of Franklin County commuters who walked
(4%) or other means (1%), such as bicycling, was similar to the state averages. However, the percentage of commuters who took transit in Franklin County was 2%, compared to the statewide average of 10%. A higher percentage of employees worked at home in Franklin County (7%) than the statewide average (5%). Most of the towns with high percentages of workers working from home (10% or greater) lived in the western county hilltowns, such as Ashfield, Conway, Hawley, Rowe, and Shelburne. Other towns with high rates of at home workers were Gill, Leverett and Wendell.

As mentioned previously, it is anticipated that the number of employees working from home, also known as telecommuters, will continue to increase in Franklin County in the coming decades. The growth in telecommuting will be driven by the increasing number of technology and information-based jobs that can be conducted from remote locations, such as a worker’s home. It will also be driven by the number of people who move to Franklin County, but who choose to keep jobs that are based outside of the region and to which they do not need to commute every day. Another important factor that will promote telecommuting in the region is the recent and pending expansion of telecommunications infrastructure and high-speed internet services in the region.

**Commute Patterns**
The American Community Survey five-year estimates data provides commuter information including the average or mean travel time to work. The mean travel time for Franklin County workers is 24.2 minutes, compared to 29.2 minutes statewide. The towns with the lowest commute times are closest to major employment centers. They are Greenfield (19.4 minutes), Gill (19.7 minutes), Sunderland (20.2 minutes) and Montague (20.6 minutes). As would be expected, the towns with the longest commute times are furthest from major employment centers. They are Warwick (37.4 minutes), Heath (37.4 minutes) and Charlemont (35.7 minutes).

According to this data set, approximately 61% of Franklin County residents worked in Franklin County and 39% commuted to jobs outside the county. Of those who worked in Franklin County, 29% work in the same town where they live. For more detailed information (such as the destinations where Franklin County residents work), another data set provides more detailed information on commuting patterns at the town and county level.

According to commuter inflow and outflow data from the U.S. Census\textsuperscript{11}, there were 33,615 people who were employed and lived in Franklin County in 2015. Of these employed

\textsuperscript{11} U.S. Census Bureau, Longitudinal Employer-Household Dynamics, 2015
Franklin County residents, 41% worked at jobs located in Franklin County, and 59% worked at jobs located outside of the county. Conversely, there were 23,083 employees that worked at jobs located in Franklin County. Of these workers, 60% were filled by people who lived and worked in Franklin County, and 40% were filled by workers who lived outside of Franklin County. As there were more people leaving Franklin County than entering Franklin County to work, this results in a net outflow of workers that totaled 10,532 people in 2015.
Most employed Franklin County residents that worked outside of Franklin County, worked in employment centers within easy commuting distance, such as Amherst and Northampton in Hampshire County, or Athol in Worcester County. However, other top work destinations for residents included the Commonwealth’s largest cities such as Springfield, Worcester and Boston. A breakdown of worker destinations by county is shown in Figure 4-8.

For jobs located in Franklin County, the majority of workers (59%) are Franklin County residents. For the workers who live outside the county and commute to Franklin County for work, most live in Hampshire, Hampden and Worcester counties. Workers also come from Windham County in Vermont and Cheshire County in New Hampshire. Franklin County and these two neighboring counties to the north share many characteristics. Workers, employers and consumers do not focus on state boundaries when seeking employment or goods and services. Recently, the FRCOG and corresponding regional planning agencies in southeast Vermont and southwest New Hampshire have begun working together to examine shared transportation and economic issues and improve connections between them.
**Land Use**

The link between land use and transportation is important to consider as new transportation facilities are reviewed or the expansion of old facilities is evaluated. Transportation improvements or expansions, such as adding roadway lanes, upgrading bridges to remove weight restrictions, or establishing and expanding transit services, can themselves promote additional development and influence future development patterns.

As the state’s most rural region, Franklin County has experienced a relatively limited amount of development. The most recent land use data is from 2005. While more recent data is not available, building permit data trends indicate that residential growth was at a considerable lower rate than in years prior to 2005.

The most recent land use figures available are based on MassGIS 2005 mapping of land uses from aerial photographs. Acreage by land use for Franklin County is shown in Table 4-2.

According to 2005, forestland is still the predominant land use, accounting for more than three-quarters (77%) of the county’s acreage, and even the most urbanized towns in the county, such as Greenfield, are at least 45% forested. Farmland is the second largest land use, comprising 7.8% of the county’s total land area. All developed land uses (residential, commercial, etc.) combined account for only 5.7% of the county’s acreage.

Although Franklin County is predominately undeveloped, it experienced substantial growth and development in the late 1980s and into the 1990s. Between 1985 and 1999, the amount of developed land in Franklin County increased 30% (7,200 acres). Most of this new development, almost 6,600 acres, was residential in nature. In Massachusetts, new

**Table 4-2: Franklin County Land Use, 2005**

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Acreage</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undeveloped Land</strong></td>
<td>436,975</td>
<td>94.3%</td>
</tr>
<tr>
<td>Forest</td>
<td>357,909</td>
<td>77.2%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>36,072</td>
<td>7.8%</td>
</tr>
<tr>
<td>Open Land</td>
<td>8,164</td>
<td>1.8%</td>
</tr>
<tr>
<td>Recreation</td>
<td>1,716</td>
<td>0.4%</td>
</tr>
<tr>
<td>Water/Wetlands</td>
<td>33,111</td>
<td>7.1%</td>
</tr>
<tr>
<td><strong>Developed Lands</strong></td>
<td>26,535</td>
<td>5.7%</td>
</tr>
<tr>
<td>Residential</td>
<td>18,981</td>
<td>4.1%</td>
</tr>
<tr>
<td>Commercial/Industrial</td>
<td>2,178</td>
<td>0.5%</td>
</tr>
<tr>
<td>Urban Open*</td>
<td>2,072</td>
<td>0.4%</td>
</tr>
<tr>
<td>Transportation</td>
<td>2,167</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other Developed Uses**</td>
<td>1,136</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Total Acreage</strong></td>
<td>463,511</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Urban Open land includes parks, cemeteries, public and institutional buildings, and green spaces.

**Other Developed Uses include mining, waste disposal, etc.

residential development can occur along road corridors with relative ease, due to the State’s Approval-Not-Required (ANR) rules, which allow for the subdivision of land without Planning Board approval, if certain conditions can be met. These conditions are that each subdivided lot must meet minimum road frontage requirements and must have adequate access to protect public safety and welfare. As a result of the expansion in residential acreage from 1985 and 1999, the amount of Franklin County agricultural land decreased by 12% and the amount of forestland fell by 2%.

MassGIS updated its aerial photography and land use data in 2005. Unfortunately, due to different data collection methodology, the 2005 land use data is not directly comparable to the 1999 land use data. As a result, it is difficult to assess how land uses have changed in the six years between 1999 and 2005. It is very likely that the trend of residential growth continued during that time period based on the increase in building permits. Between 2000 and 2004, the number of new housing units in the region grew steadily. By 2007, the number of building permits dramatically decreased due to the economic impacts of the Great Recession. After 2012, the number of building permits began to increase. The sharp rise in 2015 is from due to the reconstruction of the large, multi-family Leyden Woods apartment complex in Greenfield. Today, there are indications that the construction market is beginning to strengthen and it is likely that development will pick up in the next several years – particularly as more communities gain access to broadband service. Figure 4-8 shows the change in building permit activity in Franklin County between 2000 and 2017.

**Figure 4-10: Number of Building Permits Issued in Franklin County, 2000 to 2017**

Almost all of the housing units that have been developed since 2000 were single-family homes built along existing roadways, such as on ANR lots. There are currently very few subdivisions being built in the region. However, as growth in the region continues and there is less land with necessary frontage available for development, it is anticipated that more subdivisions will be constructed. These subdivisions will include new roadways to serve the new homes. These roadways will need to be maintained as either private roads by the developer and property owners, or as public roads by the communities in which they are located. The impact of the subdivision roads on existing roadway infrastructure will also need to be assessed.

In response to development pressures and concerns about their ability to handle future potential growth, a number of Franklin County communities have revised their zoning bylaws to direct growth to areas within their towns with the highest current levels of development and the best infrastructure (water, sewer, roadways) to accommodate new growth. At the same time, towns have also worked to encourage other areas to remain undeveloped farmland and forestland. Land conservation organizations in the region, such as the Franklin County Land Trust and the Mount Grace Land Conservation Trust, have protected a considerable amount of private farm and forestland in the region through the outright purchases of land, or through the purchases of development rights.

**Summary of Demographics and Socioeconomic Trends**

The following are key demographic and socioeconomic trends that have significant implications for the transportation system and transportation planning within the region:

- Population size has remained relatively stable and is projected to decline slightly in coming decades.
- There has been and will continue to be high growth in the number of elderly residents.
- The unemployment rate continues to be low and the size of the labor force is recovering from Great Recession levels.
- There will be a growing number of telecommuters/long distance commuters from Franklin County.
- Employment projections show that employment in Franklin County will decline over the next twenty-five years.
- The pace of new construction has been very slow and may increase in the future, but will likely not be significant ensuring that Franklin County remains a rural area with a large percentage of its acreage in forest, farm, and open land.
Top Employers in Franklin County with 2017 Population Estimate

Sources: Map produced by the Franklin Regional Council of Governments Planning Department. GIS data sources include MassDOT, MassGIS and FRCOG. MA Executive Office of Labor and Workforce Development. Minagroup, 2018. Depicted boundaries are approximate and are intended for planning purposes only, not to be used for survey.