CREATING PLACES TO AGE in NEW JERSEY

NEW JERSEY FUTURE

January 2014

Creating Places to Age in New Jersey

January 2014

Table of Contents

Acknowledgments

Creating Places to Age in New Jersey

EXECUTIVE SUMMARY

AMERICA AND NEW JERSEY are becoming older. People are living longer, thanks in part to advances in medical technology, and older people are also remaining independent longer than they used to, rather than moving in with younger relatives or into institutional living quarters. As of 2012, more than 2.3 million New Jersey residents – 26.6 percent of the state's population – were at least 55 years old, with more than half of that total over the age of 65. Nearly 200,000 were 85 or older. The trend is only going to get more pronounced in the future, with the aging of the huge Baby Boomer cohort.

Is New Jersey ready for the coming growth in its older population? Specifically, from a land-use perspective, has New Jersey built the kinds of places – and built enough of them – that provide what older adults are likely to be seeking as they age? This report considers several development characteristics that make a place amenable to an aging and less mobile population: a high number of destinations per square mile; presence of a mixed-use "downtown;" a well-connected local street network; and access to public transportation, particularly local buses. For older people, the ability to get out of the house, accomplish daily errands, and interact with others is a major determinant of quality of life. These four development characteristics contribute to making trips shorter and reducing reliance on the automobile for those who may be facing constraints on their ability to drive.

The report examines the mismatch between the places with the most aging-friendly development characteristics, on the one hand, and where older residents are actually living, on the other. The results should be cause for concern. Among the findings: 30 percent of New Jersey residents aged 55 or older live in areas characterized by low-density and therefore primarily car-dependent development. This amounts to just under 700,000 people. About 12 percent (roughly 1 in 8) live in municipalities with no local bus service at all. Almost 300,000 older people live in one of the 109 New Jersey municipalities that score poorly on all four of the aging-friendliness metrics examined here. In other words, New Jersey already has hundreds of thousands of older residents who are at risk of being isolated in places that do not lend themselves to getting around by any means other than driving. And this number is likely to get bigger as the ranks of older New Jerseyans continue to swell.

What can be done to address this spatial mismatch? Making New Jersey's municipalities more aging-friendly will involve a whole suite of strategies. In places already blessed with "good bones" – i.e., development patterns that already facilitate more efficient trip-making – solutions should focus on diversifying the housing stock, making sure such towns are well supplied with the types of housing that people are likely to want as they age, and at prices affordable to retirees. In lower-density, car-dependent places, officials and developers should look for retrofitting opportunities, to create new pedestrian-friendly downtowns in places that never had them. In any case, doing nothing is not an option. The graying of the populace is a statewide – indeed, nationwide – phenomenon. We need to start preparing good places for people to age.

A supplement to this report takes a closer look at Bergen and Passaic Counties to see whether and to what extent the same mismatch between older residents and aging-friendly design holds true in these two counties as is present in the state as a whole. It also investigates a few additional factors affecting quality of life for older residents that were not discussed in the main report – diversity of housing types, housing unit size, affordability, and safety. These factors can undermine the aging-friendliness of a municipality whose development characteristics otherwise make it a good place to age.

Aging is a land-use issue

AMERICA IS BECOMING OLDER. The number of Americans over the age of 65 grew by 38.2 percent between 1990 and 2012, compared to 26.2 percent growth in the population overall. Thanks to advances in medical technology, people are living longer, with the result that the fastest-growing age groups are the ones at the upper end of the scale: The number of Americans 85 or older grew by nearly 90 percent from 1990 to 2012. Older people are also remaining independent longer than they used to, rather than moving in with younger relatives or into institutional living quarters. And these phenomena are only going to become more pronounced in the future as the huge Baby Boomer cohort, the first of whom turned 65 in 2011, goes on to swell the ranks of the upper age groups. The Census Bureau projects that by 2030, 20 percent of the U.S. population will be over the age of 65, up from 13.8 percent today and 12.6 percent in 1990. And the number of people 85 or older is projected to triple from 2015 to 2060.

Is New Jersey ready for the coming growth in its older population? From a land-use perspective, has New Jersey built the kinds of places – and built enough of them – that provide what older adults will likely be looking for as they age? Or are our development patterns a slow-motion crisis in the making, poised to strand hundreds of thousands of older residents in car-dependent environments as the physical impairments that come with age gradually erode their ability to drive – and hence their ability to accomplish many of their daily needs? This report focuses on answering these questions.

Has New Jersey built the kinds of places – and built enough of them – that provide what older adults will likely be looking for as they age?

The answers depend on our assumptions about what types of neighborhoods we expect people to want as they grow older, and whether these desired living environments are currently being supplied by the market. Among the "empty nesters" who are still working, concerns are likely to focus on a desire to spend more free time pursuing cultural and recreational opportunities and less time doing yard work and maintenance. Among the older age cohorts, constraints on mobility and health are likely to take on greater importance. (According to the AARP Public Policy Institute's 2011 *State Housing Profile* for New Jersey,[1] citing data from the 2009 American Community Survey, 39 percent of people aged 65 or older in the state have some sort of vision, hearing, physical, or cognitive disability.)

In either case, the ease with which older adults can get to desired destinations is a major determinant of quality of life, especially if they can do so without needing to drive very far, or without needing to drive on busy regional roads, or perhaps without needing to drive at all. The ease of getting around is superficially just a transportation problem, but while "transportation needs" may sound dry and impersonal, the phrase is really a stand-in for an older person's (or anyone's, for that matter) ability to get out of the house, accomplish his or her daily errands, and interact with others. In many respects, quality-of-life needs boil down to transportation needs.

Jeff Speck sums up what kind of neighborhoods older residents will be looking for in *Walkable City: How Downtown Can Save America, One Step at a Time:*[2]

> With the leading edge of the boomers now approaching sixty-five years old, the group is finding that their suburban houses are too big. Their child-rearing days are ending, and all those empty rooms have to be heated, cooled, and cleaned, and the unused backyard maintained. Suburban houses can be socially isolating, especially as aging eyes and slower reflexes make driving everywhere less comfortable. Freedom for many in this generation means living in walkable, accessible communities with convenient transit linkages and good public services like libraries, cultural activities, and health care.

In light of the importance of getting around, New Jersey Future's value judgments about what community characteristics make a place good for older people are rooted in these basic assumptions:

- Recent retirees with a lot of free time on their hands and who are still fairly mobile may be looking for a stimulating, mixed-use environment, with homes, shops, restaurants, and other cultural and recreational activities all within close proximity – i.e. the type of land-use mix offered by traditional downtowns. With a commute to work no longer part of the calculus for residential locational decisions, physical proximity to these other activities takes on greater importance. Easy access to a variety of destinations is perhaps more of an issue for retirees than for the general population because they have more time to spend on leisure activities, but traditional downtowns are ultimately of interest to older residents for the same reasons they're of interest to anyone, regardless of age, who wants to live in a stimulating mixed-use environment.

- Some recent retirees may choose to continue working part-time[3] at a local business, or may want to volunteer with a civic group or non-profit. With "work" now more of a leisure activity, these individuals will be looking for job locations that are convenient to their homes, rather than the other way around. Places having multiple job and volunteer options in close proximity will thus be particularly attractive to them.

- Empty-nesters who are still working will be looking for many of the same things as recent retirees, in an effort to maximize the free time that they are no longer spending on raising families.
- Older people with physical or vision impairments may no longer be able to drive at all, or may not be able to rely on their cars for all trip purposes at all times of the day, or may not be able or willing to drive in every type of roadway environment, preferring to take shorter trips on low-speed local roads. They would thus desire a residential setting where many trips can be accomplished via walking or public transit, and where driving trips will be shorter and will not necessitate travel on busy regional roads. Basically these are the same reasons that in-town living appeals to anyone who wants to spend less time in the car.

The land-use characteristics that make a place good for older people are the same "smart-growth" features that make it easier for everybody to get around.

The main difference between the transportation needs of older residents and the needs of the population at large is that for older people, getting around without a car is more likely to be a necessity, brought on by physical impairment or slowed reflexes, rather than a personal preference. As of the 2010 American Community Survey, 17.4 percent of all New Jersey households headed by someone aged 65 or older did not own a vehicle (this amounts to nearly 125,000 car-less households in that age cohort), compared to only 10.0 percent of households headed by someone under 65. But whether by necessity or choice, the land-use characteristics that make a place good for older people are the same "smart-growth" features that make it easier for *everybody* to get around:[4]

- **Compactness/density:** Putting destinations closer together facilitates walking and biking, makes public transit more viable, and makes car trips shorter for those trips that are still taken by car.
- **Mix of uses:** Putting different types of destinations (residential, employment, shopping) near each other means that multiple purposes can often be accomplished in a single trip, and that more types of trips can be taken by non-motorized means or by a shorter drive.
- **Street network connectivity:** A street network that is more grid-like and less branching, with small blocks, mostly through-streets, and fewer looping roads and dead-ends, creates multiple route options and ensures that short as-the-crow-flies distances actually translate into short trips.
- **Access to public transportation**

Another important but often underappreciated aspect of what has come to be known as "smart growth" – development that puts a variety of destinations in close proximity to each other and to a variety of transportation options, and encourages walking among those destinations – is its fostering of social connections and a feeling of community, which are especially important to older people whose time is no longer consumed with the more individualistic pursuits of career or raising a family. By getting people out of their cars and onto the sidewalk, a more compact and walkable development pattern creates the opportunity for "unplanned encounters" with neighbors and strangers, the kinds of personal interactions that are important for creating and maintaining social cohesion and a sense of shared responsibility to the community – and the kinds of interactions that are nearly impossible when everyone is driving around in their own private automobiles. For older people who are no longer interacting with coworkers or immediate family members on a daily basis, these types of interactions are an important safeguard against social isolation.

Proceeding under the assumption that compact, walkable, well-connected places are particularly good places for older people, we will define a methodology for identifying these aging-friendly places, based on a series of variables that characterize the kind of residential setting that allows older people to maintain their mobility and social interaction in the context of their decreased ability or desire to drive. We will then examine the geographic distribution of the 55-and-over population over New Jersey's 566[5] municipalities compared with how well the municipalities score on each of these variables, drawing attention to places where there appears to be a mismatch – places with poor scores but large populations of older people.

For older people who are no longer interacting with coworkers or immediate family members on a daily basis, the "unplanned encounters" with neighbors and strangers that are naturally engendered by a compact and walkable development pattern are an important safeguard against social isolation.

It is important to note that this report focuses specifically on the land-use characteristics that make a place good for older Americans. There are plenty of other strategies for making a place more aging-friendly, like wellness programs or efforts to promote certain types of housing arrangements, but these are beyond the scope of this report.

Overall distribution of the older population(s)

AGE COHORTS

In looking at whether or not older people are living in places that our indicators identify as having aging-friendly characteristics, it is important to keep in mind that there are actually multiple generations of older residents, whose needs may differ. For purposes of this report, we will divide older people into three age groups:

- **Age 55 to 64:** We can think of this group as "late middle age" or "active adults," many of whom are still working. This is roughly the older half of the Baby Boom, who are just starting to hit traditional retirement age. They will redefine what it means to be a "senior citizen," as they have redefined the goals and standards of every other age range through which they have passed.

- **Age 65 to 84:** This age range used to be what people thought of as "retirees," a range beyond which life expectancy did not used to extend very far, until recently. This is the age range into which the older Baby Boomers are just beginning to enter.

- **Age 85 or older:** These are mainly the parents of the Baby Boomers. This is the smallest but fastest-growing subgroup of older people, as people are living longer thanks to healthier lifestyles and better health-care technology.

As of 2012,[6] more than 2.3 million New Jersey residents – 26.6 percent of the state's population – were at least 55 years old, with more than half of that total over the age of 65 and nearly 200,000 being 85 or older. Broken down by age range, 12.5 percent of the state's population was between 55 and 64 years old, 12.0 percent were aged 65 to 84, and 2.1 percent were 85 or older. New Jersey is slightly older than the nation as a whole: the corresponding national percentages are 12.3 percent aged 55 to 64, 11.9 percent 65 to 84, and 1.9 percent 85 or older.

Both in New Jersey and nationally, the percent of the population aged 55 or older has grown appreciably since 1990. **(See Figure 1.)** In 1990, only 22.7 percent of New Jerseyans were 55 or older, as were only 21.1 percent of all Americans (compared to 26.0 percent in 2012). These percentages increased because the ranks of the older age groups have generally grown faster than the population as a whole. From 1990 to 2012, total New Jersey population grew by 14.7 percent, but the number of people aged 55 to 64 grew by 54.1 percent, the number aged 65 to 74 grew by 13.6 percent,[7] and the number 85 or older nearly doubled, growing by 94.8 percent. Corresponding growth rates at the national level were similarly dramatic and even higher than New Jersey's, except in the 85+ category, where New Jersey's growth rate was faster, despite slower total population growth than the nation overall.

As of 2012, more than 2.3 million New Jersey residents – 26.6 percent of the state's population – were at least 55 years old, with more than half of that total over the age of 65 and nearly 200,000 being 85 or older. The issue of where older people are living is a big issue, and getting bigger.

FIGURE 1. PERCENT OF POPULATION AGED 55 OR OLDER, 2012 VS. 1990, FOR NEW JERSEY AND THE U.S.
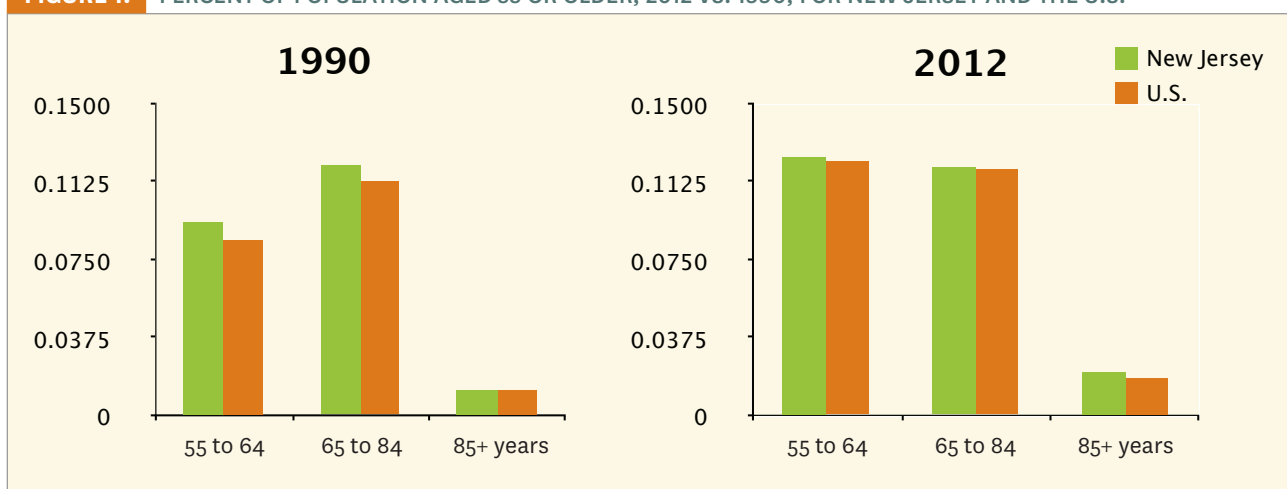
Both New Jersey and the United States have gotten older since 1990. Bureau of the Census (1990 Census; 2012 one-year American Community Survey)

The issue of where older New Jerseyans are living is thus a big issue, and getting bigger. Those in the youngest cohort are likely to place more emphasis on access to a variety of destinations from a recreational/leisure perspective. The oldest cohort is likely to care most about compact development patterns from a more pragmatic physical-mobility standpoint – the closer things are to each other, and to someone's home, the easier it will be for them to visit multiple destinations in one day. The middle group is likely to be a mix of the two. But ultimately, all three cohorts are looking for the same set of characteristics – a variety of destinations clustered together in an environment that does not require long or stressful car trips.

"GRAY GHETTOES"

Before we examine the distribution of older populations with respect to land-use characteristics, let us first consider the degree to which older people are concentrated in certain places, irrespective of what kind of places they are. While the proliferation of age-restricted developments is not directly a land-use issue, some advocates for older people are concerned that such developments may be increasing the risk of social isolation among their residents by cutting them off from interactions with younger people.

Some of these so-called "gray ghettoes" were built as self-contained communities that purported to consolidate many of their residents' daily needs in one place, reducing the need to leave the property at all. These projects can be seen as an attempt to solve some of the same problems addressed by institutional housing for older people but without the institutional supervision that is not necessary for residents who are still able to maintain independent living quarters. Other age-restricted "communities" are little more than single-use sprawl whose main purpose, operationally, is to exclude families with school-age children and the increased property tax bills that come with them. In either case, some advocates worry about the psychological effects on older people of being surrounded only by their age peers[8] – and separated from their extended families – rather than feeling like part of a larger community.

To the extent that the phenomenon of older people living in places dominated by others of similar age is a concern in and of itself, we can identify where the most dramatic such concentrations exist. **(See Appendix A.)** Looking first at all residents 55 and over, the statewide percentage is 25.4 percent. There are 17 municipalities in which the percent of residents aged 55 and over is more than double the statewide percentage (and more than triple in the cases of the small Shore towns of Cape May

Point and Mantoloking), an another 27 municipalities in which the percentage is more than half again as large as the statewide percentage (i.e. greater than 38.1 percent). Together, these 44 municipalities account for 5.8 percent of all residents statewide over the age of 55, while comprising only 2.9 percent of total statewide population.

Some advocates for older people are concerned that the proliferation of age-restricted developments may be increasing the risk of social isolation among their residents by cutting them off from interactions with younger people.

The "active adult" cohort is slightly less likely to be concentrated geographically: There are only 31 municipalities where the concentration of residents aged 55 to 64 exceeds the statewide level of 11.9 percent by more than half, and only 1.1 percent of 55-to-64-year-olds live in one of these municipalities. But the tendency for concentration increases notably for the older groups. For 65-to-84-year-olds, there are 58 municipalities in which the percentage of the population in that age group is at least half again as high as the statewide rate of 11.4 percent; 10.3 percent of all 65-to-84-year-olds in the state live in one of these 58 municipalities, which account for only 4.7 percent of the general population. And for those aged 85 and up, the geographic concentration is even more pronounced. Statewide, only 2.0 percent of the population falls into this age category, but there are 98 municipalities in which the percentage is more than 1.5 times that figure, including 11 where it is more than three times the statewide percentage. These 98 municipalities together host one quarter (24.9 percent) of all people in the state aged 85 or older, while they contain only 11.2 percent of total population.

Part of the reason for the increased geographic concentration of older age cohorts is the increasing need for institutionalized living arrangements among the oldest cohort. (In 2011, 16.3 percent of people aged 85 or older in New Jersey, or about one in six, were living in some type of group quarters.[9]) Elder care facilities are a land use that is specialized enough that they are not necessarily needed in every one of New Jersey's 566 municipalities, so it may stand to reason that some municipalities (those that host such facilities) would host a disproportionate share of the state's 85+ population. It is thus not clear whether the concentration is cause for concern or if it can safely be assumed to be a natural effect of the distribution of institutional elder-care facilities.

Identifying good "places to age"

LEAVING ASIDE THE question of whether the geographic concentration of older people is a problem in itself, the remainder of this report will examine the degree to which those residents are concentrated in places whose design characteristics may make it difficult for them to get around. To discover mismatches between where New Jersey's older residents are living, on the one hand, and which places' built environments are most amenable to older people's mobility needs, on the other, we will need a methodology for identifying and quantifying those characteristics that we think foster older residents' mobility. New Jersey Future has identified four factors, described below – compactness of the development pattern (as measured by a concept called "net activity density"), presence of a mixed-use center, street network connectivity, and access to public transportation – that we believe contribute to a municipality's livability and walkability and which are measurable with available data. We will investigate the distribution of New Jersey's older populations with respect to how well the state's municipalities score on each of the four factors. Presented with our description of each mobility concept is our proposed metric for measuring it at the municipal level,[10] along with a brief explanation of what we think it tells us about how well the design of a place is suited to older people's mobility needs.

1. COMPACTNESS OF THE DEVELOPMENT PATTERN

The first of three key components of "smart growth" – how compact the development pattern of a place is – refers to the extent to which activities, whether residential or non-residential, are concentrated near each other. It can be quantified as "net activity density," computed as the sum of population and employment for a municipality, divided by the municipality's developed land area. Net activity density is a more accurate descriptor of a place's built environment than simple gross population density (total population divided by total land area). It is important to note that this metric pertains only to the developed part of the municipality; it is not a measure of how much of the municipality's land area is actually developed.

Higher activity density is better for older people because it puts destinations closer together, an important consideration for people with constraints on their mobility.

Net activity density can be thought of as a proxy for building density; i.e., what a place physically looks like when experienced at the ground level. By counting jobs as well as population, we are indirectly accounting for buildings used for commercial purposes in addition to residential buildings. And by using as the denominator only developed acres rather than total acres, we avoid diluting the value of the statistic through the inclusion of undeveloped land.

Based on an examination of the distribution of net activity density (population plus jobs per square mile) and a look at a handful of individual municipalities for verification, the following categories were defined:

- **urban =** net activity density ≥ 15,000 population plus jobs per square mile
- **small city/urban suburb =** net activity density between 10,000 and 15,000
- **dense suburban/small town =** net activity density between 7,500 and 10,000
- **moderate suburban =** net activity density between 4,000 and 7,500
- **low-density suburban =** net activity density between 2,000 and 4,000
- **large-lot =** net activity density < 2,000

Places falling into the higher categories should be better for older people because they generally bring destinations closer together, putting more things within easy access, which is especially important for people with constraints on their mobility.

2. PRESENCE OF A MIXED-USE CENTER

To capture the second component of "smart growth" – a mix of land-use types – we seek to estimate the degree to which a municipality hosts a "center," a part of town where multiple land uses are located in close proximity to one another, as opposed to single-use zoning where different land uses are banished to different quadrants.

Identifying a "center" is a somewhat subjective process. At what scale do the different land uses need to be mixed in order to qualify? There is also the problem of data availability – data on the prevalence of different land-use types are not easily available for every municipality, and even if they were, the question remains as to how to discern design characteristics like whether a retail establishment has its parking in the front or the back, or indeed if it has any parking at all. Fortunately, others have grappled with this question in the past for the state of New Jersey as part of the implementation of the State Development and Redevelopment Plan[11] ("State Plan"), which did, in fact, identify "centers." In New Jersey Future's judgment, the process of identifying State Plan centers was a thorough and inclusive process that may have missed a few real centers on account of individual municipal

participation being voluntary, but which does not appear to have produced any obvious "false positives" (places that were given center designation without really embodying the principles of a mixed-use center). For this reason, we are inclined to defer to the State Plan process for identifying mixed-use centers; our methodology will seek only to add cases that may have been missed but will not attempt to second-guess the places that were positively identified by the process.

Similar reasoning applies to the identification of centers in the Pinelands. Because land use in the Pinelands is governed by the Pinelands Comprehensive Management Plan, the region was not part of the State Plan process. Instead, the Pinelands Comprehensive Management Plan defines its own system of land-use categories, two of which we will treat as equivalent to State Plan centers: "Pinelands town" and "Pinelands village." (A similar process of identification of growth areas is currently under way in the Highlands but is not as far along. We have opted to include a few Highlands growth areas among our defined "centers" where a mixed-use town center of some sort is already in place.)

We consider the State Plan designation to be a reliable indicator of the presence of a real mixed-use center, but for various reasons, many municipalities never bothered to petition for official center designation. In an attempt to capture potential "stealth" centers, we will identify any additional municipality as containing a center if it hosts a Business Improvement District (BID) or a "Main Street" or "Downtown" organization.[12] The presence of one of these organizations signals that local business owners are sufficiently aware that they are in a walkable downtown that they have proactively formed some sort of downtown business association. Note that these districts are concerned only with the retail area of a municipality, however, and are not attempting to delineate centers as holistically as the State Plan process did. Their host municipalities thus cannot be classified as precisely as those with State Plan-designated centers.

In addition, and again reflective of many municipalities never having bothered to apply for State Plan center designation, we will also allow a few places to qualify as centers based on net activity density, with a few additional qualifiers **(detailed in Appendix B)**, even if they don't have a "Main Street"-type organization. There are some municipalities (e.g., Harrison, Keansburg, Lambertville, Bordentown, Swedesboro, and much of southern Bergen County) that host traditional downtowns with all the same characteristics as those on the "Main Street" list but whose merchants, for whatever reason, have not taken the step of creating a downtown organization. It is important to count these places as centers, and setting a net activity density threshold seemed like the best way to capture them.

Finally, it is important to make a distinction between municipalities that function in their entirety as a center and municipalities that contain a mixed-use center but also include some parts that are more uniformly single-use. The State Plan process does draw this distinction, sometimes delineating a center within a municipality and other times designating the entire municipality as a center, but perhaps not always with sufficient detail. Think of Newark as an example: Downtown Newark certainly looks like a center, but is it accurate to describe the entire 26-square-mile city as a single center, as the State Plan does? There are plenty of residential neighborhoods in Newark that are well beyond walking distance from Penn Station, or from anything else resembling a shopping district. If we don't make this distinction, our statistics for older people living "in centers" would be overstating the true numbers because they would include people living in the outlying parts of municipalities that have been designated as centers overall. **Appendix B** contains more detail about how this distinction was operationalized.

Town centers with multiple land use types in close proximity allow those with limited mobility, or with limited desire to drive, to maximize their trip-making by minimizing the distances among different types of destinations.

Using as the criteria the presence of a State Plan designated center, and/or the presence of a "Main Street"-type organization, and/or sufficiently high net activity density, we define the following categories for "presence of a mixed-use center:"

- **center =** the entire municipality is considered to be a center
- **contains ≥ 1 center =** the municipality definitely contains a center; it may contain multiple centers, and/or it may also contain some non-center territory, but the situation cannot be fully determined from available data
- **contains single center =** the municipality contains a single State Plan- (or Pinelands-) designated center and also some non-center territory
- **contains multiple centers =** the municipality contains multiple designated centers and also some non-center territory
- **no centers identified =** municipality does not contain a mixed-use center of any kind that can be identified from available data

Detailed decision rules for assigning a municipality to one of the above categories can be found in **Appendix B**.

The more "center"-like a place is, the better it will be for older residents. Centers concentrate many kinds of activities in one place, allowing those with limited mobility, or with limited desire to drive, to maximize the utility of their trip-making by accessing

multiple destinations in one trip and by minimizing the distances among different types of destinations.

3. STREET NETWORK CONNECTIVITY

In addition to density/compactness and a mix of uses, the third key component of "smart growth" is the connectivity of the street network. A well-connected, grid-like street network ensures that physical proximity actually translates into ease of access, by providing multiple linkages among properties and neighborhoods so that local traffic isn't forced onto a few "main" roads for every local trip. These linkages are important to pedestrians as well as drivers, since pedestrians cannot generally cross private property or leap fences or streams and thus in most places are constrained to walking along the street. Without connectivity as the third component, high density and mixed use can end up meaning that you can see your destination just on the other side of a fence or row of hedges, but that you have to walk or drive a mile to get to it. **(See Figure 2.)**

We will measure a municipality's street network connectivity by calculating road density, the number of route-miles of road[13] per square mile of municipal land area. This is a measure of how pervasive and fine-grained the street network is. If you are traversing the network, how frequently will you encounter intersections and cross-streets? How long does it take you to go "around the block," on average? A higher road density indicates a street network with more capillaries that reach more corners of the municipality; such a network will generally offer more and shorter route options for both pedestrians and drivers.

FIGURE 2. TYPICAL DISCONNECTED STREET NETWORK
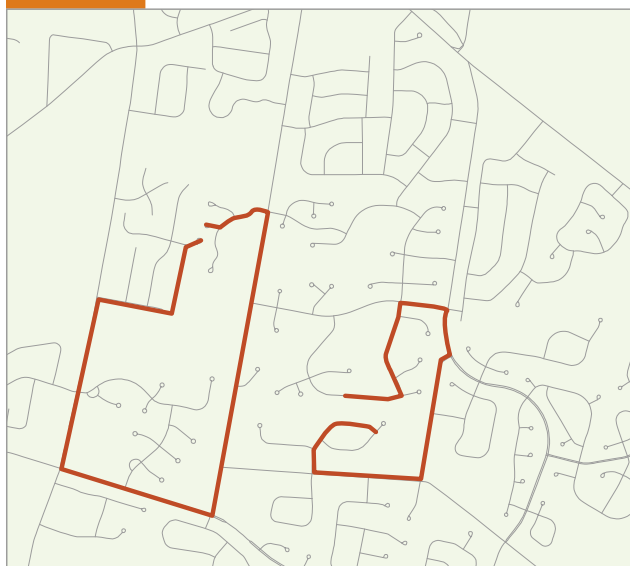
So close, and yet so far: a lack of street network connectivity can mean a neighbor's house is a mile away by car – or on foot.

Without connectivity, high density and mixed use can end up meaning that you can see your destination out your window but have to walk or drive a mile to get to it.

Road density tends to move in tandem with destination density ("net activity density," as discussed above), since the more activities per square mile a place contains, the more miles of street are going to be needed to provide access to those activities. But road density does compensate for the shortcomings of net activity density as a metric in one particular type of place: Shore towns. Shore towns generally have very compact, walkable development patterns (not surprising for places that depend on tourism for their livelihood) but also have many buildings that are not occupied year-round and hence don't score well on net activity density. Road density captures the compact nature of these places where reliance on annual population and employment statistics cannot.

The following categories are defined for describing road density:
- **Very high** = 20 or more route-miles of road per square mile
- **High** = at least 15 but fewer than 20 route-miles of road per square mile
- **Good** = at least 10 but fewer than 15 route-miles of road per square mile
- **Medium** = at least 5 but fewer than 10 route-miles of road per square mile
- **Low** = at least 2 but fewer than 5 route-miles of road per square mile
- **Very low** = fewer than 2 route-miles of road per square mile

See Figure 3 for examples of what the street networks look like for municipalities having road density values near the top, middle, and bottom of the distribution.

It should be noted that this metric will underestimate the true connectivity of the municipal street network in a few special cases, namely municipalities with large areas of roadless or nearly-roadless land, in which case the metric gets diluted by a denominator (total land area) that is unfairly large. This happens in municipalities with large swaths of totally undeveloped territory – e.g., Atlantic City, Brigantine, Secaucus, Kearny — and also in municipalities like Teterboro, Newark, New Brunswick, and Jersey City that contain large-block industrial land uses like an airport, port facility, rail yard, industrial park, or warehouse district that do not require many miles of road per square mile to access them. However, other metrics will capture the degree to which the actual inhabited parts of these municipalities are accommodating to older residents.

Paterson

Scotch Plains

Elsinboro

Paterson, Scotch Plains, and Elsinboro Township are all roughly the same size — about 5,000 acres — but they have very different road densities. Paterson's street network has 21.7 route-miles of local road per square mile, creating a very high degree of connectivity and walkability. Scotch Plains is a typical older suburb, with 9.7 route-miles per square mile. And Elsinboro Township in Salem County, at 2.1 route-miles per square mile, is illustrative of what the road networks look like in rural and largely undeveloped areas.

Places with a higher degree of connectivity will be better for older residents. They create better pedestrian accessibility for those who can no longer drive at all or don't want to drive as much (and, for that matter, for people of any age who don't want to drive as much). And for those older people who still drive, better local street connectivity makes car trips shorter for many types of trips and often eliminates the need to drive on busy regional roads.

4. ACCESS TO PUBLIC TRANSPORTATION

The first three mobility concepts discussed above all pertain to the physical characteristics of the built environment and how they affect the ability to get around. A compact development pattern with many types of destinations in close proximity and with a well-connected street network will generally enable older residents – or anyone else – to accomplish a variety of daily activities without having to spend a lot of time in the car.

Something else that can help people accomplish daily activities, especially those with physical impairments that limit their ability to drive, is public transportation. In theory, public transportation can offer mobility in any kind of development environment if the will exists to pay for it, although in reality public transit is more cost-efficient where the other three "smart-growth" characteristics noted here are also present. Transit can operate much more efficiently and effectively where density is high and destinations are close together, creating a critical mass of travel

demand, and where surrounding areas are pedestrian-friendly, since riders can't bring their cars with them on the bus or train and will thus need to get around on foot when they exit the transit system.

There are many types of transportation services, provided by both the public and private sectors, that are available to people who do not own a car or otherwise choose not to drive. Some of them, in particular paratransit services, are specifically targeted at older residents and others with physical disabilities that may prevent them not only from driving but also from using regular public transportation. But because these services often do not operate on fixed routes, it can be difficult to amass data about them. Also, the fact that they sometimes operate in lower-density environments (where they are very costly on a per-capita basis) means that the availability of paratransit in a given municipality is not necessarily indicative that the place otherwise has a development pattern that is friendly to older residents. We thus do not incorporate paratransit into our measure of transit availability.

For purposes of measuring older residents' ability to accomplish daily needs without a car, we will focus primarily on fixed-route, fixed-schedule local bus service. Local buses function as a means for people to travel to important destinations within a place or in neighboring places, rather than for longer-distance travel to regional hubs, which is more the province of rail transit

(or commuter buses). New Jersey Transit maintains a list of all bus stops in the state that are served by official New Jersey Transit routes or by private operators contracted by New Jersey Transit. To this list, we have also added bus stops on fixed-route, daily services operated by several counties – Middlesex, Ocean, Somerset, Hunterdon, and Warren.

We will classify municipalities according to their number of bus stops per square mile of developed land. Limiting the calculation to developed land follows the same reasoning as the computation of net activity density described earlier: if the goal is to measure the degree to which destinations are served by bus, it makes sense to limit the analysis to those parts of the municipality where destinations (i.e. buildings) actually exist. Otherwise, places like Atlantic City or Millville, with dense, bus-friendly downtowns but also having large expanses of preserved or undevelopable lands, would score artificially poorly on this metric.

Levels of local bus service availability are defined as follows:

- **Excellent** = 15 or more bus stops per square mile

- **Good** = at least 6 but less than 15 bus stops per square mile

- **Medium** = at least 3 but less than 6 bus stops per square mile

- **Low** = fewer than 3 bus stops per square mile

- **None** = no local bus service

Public transit access is presumed to be a plus for older people, because it offers them access to destinations to which they may not feel comfortable driving.

As a complement to local bus service, we will also examine the availability of rail transit. Rail transit provides older residents with access to regional shopping or cultural destinations *outside* their towns without having to drive – access that is especially important for younger and more "active adults" with lots of leisure time. For this variable, we will simply indicate whether or not each municipality hosts a rail transit station. There are 216 rail transit stations – whether commuter rail, light rail, or rapid transit (PATH and PATCO) – scattered across 152 of New Jersey's 566 municipalities. We will look at what percent of the population aged 55 and older is living in transit-accessible municipalities.

Whether bus or rail, public transit access is presumed to be a plus for older people, because it offers them access to destinations to which they may not feel comfortable driving.

Spatial mismatch: aging populations vs. aging-friendly places

NOW THAT WE have defined the variables that characterize places that are good for maintaining older residents' mobility and their ability to interact with others, we turn our attention in this section to examining whether the places that best accommodate older residents' needs are actually where older residents are living. We will also investigate the degree to which older people are living in places that score poorly on one or more of these aging-friendliness metrics, with a special focus on the number of older people who are isolated in places that score poorly on all four measures and are thus effectively completely car-dependent.

Compact development: As discussed earlier, places with a high net activity density (population + employment per square mile) are good for older people, especially those in the older cohorts who are experiencing physical constraints on their mobility, because they put destinations closer together, putting more things within easy access range. But 6.4 percent of all older New Jerseyans, including 5.0 percent of those 85 or older, live in one of the 101 "large-lot" municipalities, where things are the most spread out, and another 23.9 percent of them live in the next most spread-out group, the 131 municipalities with a "low-density suburban" development pattern. So 30 percent of our older residents – a relatively constant percentage across all three cohorts – live in areas characterized by low-density and therefore primarily car-dependent development. **(See Figure 4.)** This amounts to just under 700,000 people, a very large segment of the state's older population that is likely to find it progressively more difficult to
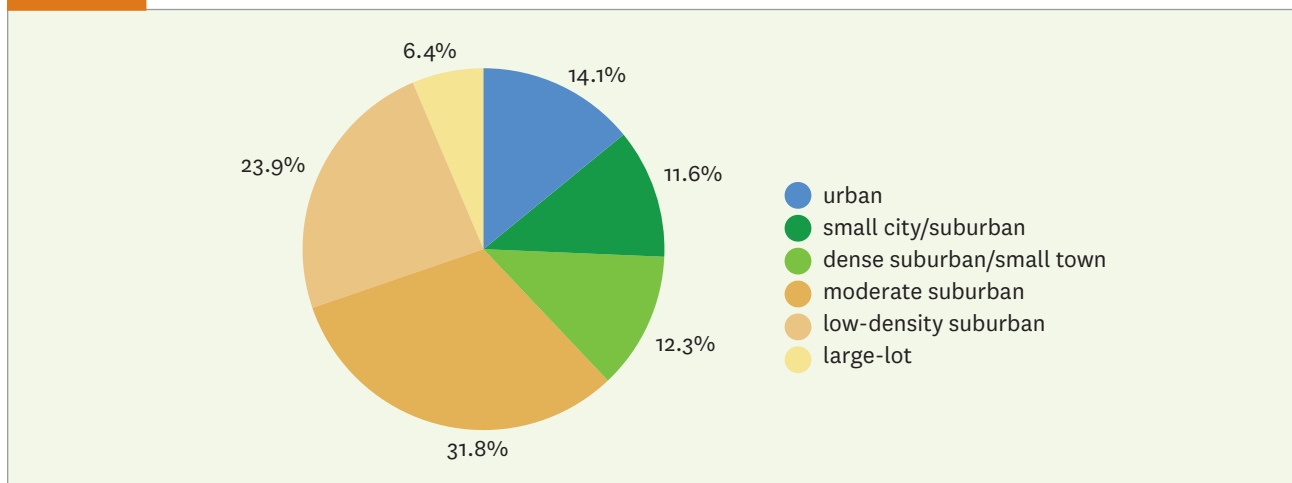
accomplish all of their daily activities as they age and are no longer able to drive everywhere.

Of course, plenty of people of all ages live in places with fairly low-density development patterns, and the geographic distribution of the state's older population actually tracks the distribution of the general population fairly closely. But this is probably not a desirable phenomenon: Ideally, we would see fewer older people in car-dependent, low-density suburbs and higher concentrations where activity density is higher. Instead, New Jersey's older population is actually slightly *under*represented in the 155 municipalities that fall into one of the three highest net activity density categories ("urban," "small city/urban suburb," and "dense suburban/small town") and therefore *over*represented in the lower-density places that are not well suited to its mobility needs. The 155 more aging-friendly municipalities together contain 43.4 percent of the state's total population but only 37.9 percent of the population 55 and over, and only 36.4 percent of the oldest cohort, age 85 and over.

30 percent of our older residents live in areas characterized by low-density and therefore primarily car-dependent development.

Presence of a mixed-use center: The news is slightly worse regarding older people's residential locations relative to the presence of mixed-use centers – those "downtown" areas where multiple land-use types are located in close proximity to one

---

FIGURE 4. PERCENT OF 55+ POPULATION LIVING IN MUNICIPALITIES CLASSIFIED BY COMPACTNESS OF DEVELOPMENT PATTERN

- urban
- small city/suburban
- dense suburban/small town
- moderate suburban
- low-density suburban
- large-lot

Three in ten New Jersey residents aged 55 or older live in municipalities with net activity densities low enough (low-density suburban or large-lot) that a car is a virtual necessity for getting around.

FIGURE 5.

PERCENT OF 55+ POPULATION LIVING IN MUNICIPALITIES CLASSIFIED BY PRESENCE OR ABSENCE OF A MIXED-USE CENTER

13.7%

42.5%

26.4%

5.1%

12.3%

- center
- contains ≥ 1 center
- contains single center
- contains multiple centers
- no centers identified
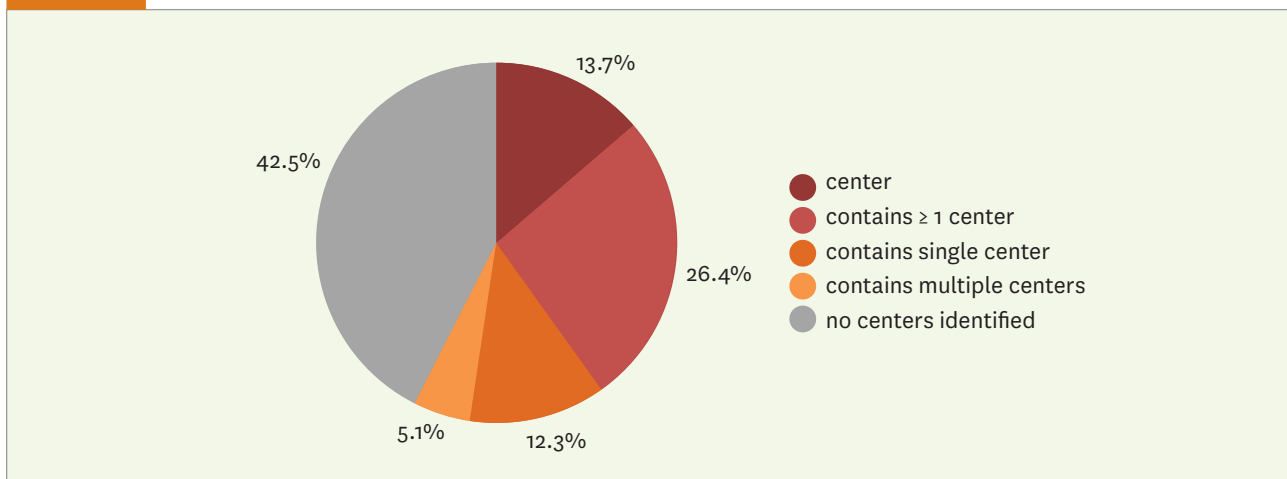
More than 40 percent of New Jersey residents aged 55 or older live in places that do not have a "downtown" area where many kinds of destinations are located close together

another rather than being confined to their own single-use zones. Across all three age cohorts analyzed, a consistent 42 to 43 percent live in one of the 307 municipalities that do not contain any kind of center, based on New Jersey Future's definition. **(See Figure 5.)** This is a slightly higher percentage than for the general population (40.1 percent), meaning that older people are actually *more* likely than younger residents to live in places where different kinds of destinations tend to be separated from each other – the reverse of what would ideally be the case. This presents a problem if we think proximity to a mixed-use center is important for maintaining older residents' quality of life and reducing their social isolation.

Only 13.7 percent of older residents live in municipalities that are unambiguously centers, and another 26.4 percent live in a municipality labeled "contains ≥ 1 center," where our methodology makes it impossible to determine whether the entire municipality functions as a center or whether it contains some non-center-like territory. The remaining 17.4 percent live in a municipality that definitely contains one or more centers but also definitely contains some non-center territory.

As with net activity density, there is a tendency for the percent living in more center-based municipalities to decrease slightly for the older age groups (that is, a smaller percent of the 85+ group lives in centers than is true for those aged 55 to 64). But again, these differences are very small; the real difference of note is the fact that older residents of all age groups are less likely to live in centers than their younger counterparts.

Street network connectivity: Almost a quarter of the state's residents aged 55 or older – 23.1 percent – live in municipalities

where the street network is not at all conducive to walking (with a road density – route-miles of local road per square mile – that scores "low" or "very low"). Another 28 percent live in municipalities with only "medium" road density, bringing the total to 51.3 percent of older people living in places with fewer than 10 route-miles of road per square mile – about the level of Cinnaminson or Scotch Plains. **(See Figure 6.)**

The fact that more than half of the state's older residents, totaling more than 1.1 million people, live in municipalities with road densities that are "suburban" at best – meaning that most trips are going to require a car, even for relatively short distances – should be cause for growing concern. As more and more people enter the stage of life where driving everywhere is no longer practical, they may find themselves trapped in these places, where walking is difficult and time-consuming, and where driving usually means driving on busy arterial roads.

More than half of the state's older residents live in municipalities with road densities that are "suburban" at best, where walking is difficult and time-consuming, and where driving is required.

Access to public transportation: About 12 percent of New Jersey residents aged 55 or older (roughly 1 in 8) live in municipalities with no local bus service at all; this percentage is consistent across all three subcategories analyzed. Another 19 percent live in municipalities with low levels of local bus service. For these people, lack of alternatives to driving can mean increasing difficulty in accomplishing daily errands without assistance from
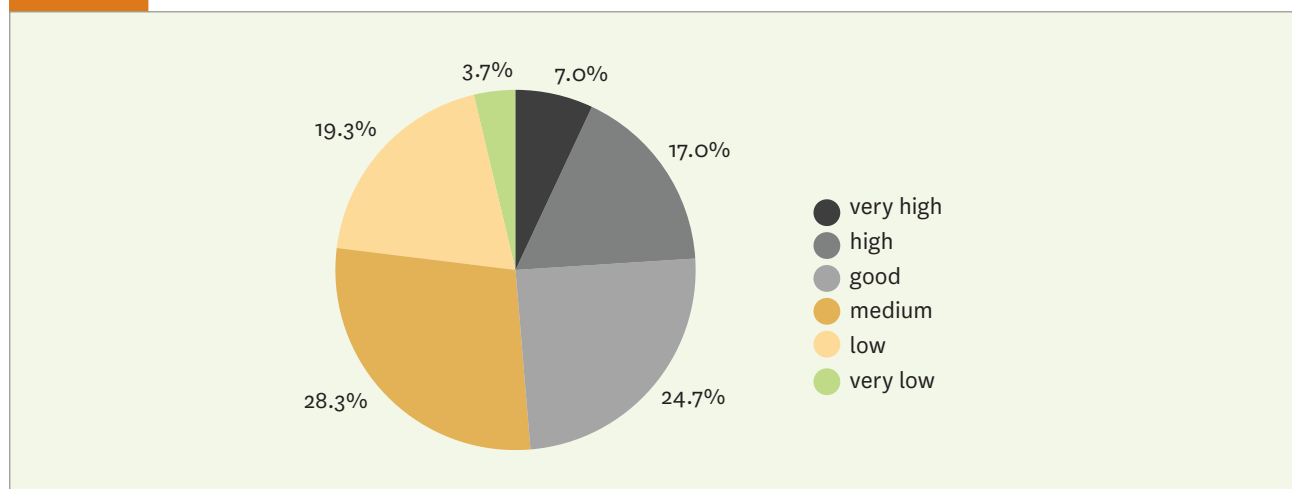
FIGURE 6. **PERCENT OF 55+ POPULATION LIVING IN MUNICIPALITIES CLASSIFIED BY LOCAL ROAD DENSITY CATEGORY**

More than half of New Jersey residents aged 55 or older live in municipalities with road densities that are suburban ("medium") at best, where most trips are going to require a car.

friends or family. On the plus side, almost one-third of all older New Jerseyans (32.0 percent) live in municipalities with excellent local bus service, and another 23 percent live in places where bus service is good. **(See Figure 7.)**

Rail transit is a bit less ubiquitous. Only 2 in 5 (39.6 percent) of all older residents live in a municipality that hosts at least one rail transit station. The percent of older people living in a rail-transit municipality declines slightly with the age of the cohort, from 40.8 percent of those aged 55 to 64, to 38.6 percent of those aged 65 to 84, to 38.1 percent of those 85 and over. This is perhaps the reverse of what should be the case, since older people are less likely to still be driving and hence more reliant on public transportation. On the other hand, the argument could be made that older, less active residents are more likely to stick

closer to home — or to be effectively confined in institutional arrangements — in which case access to the regional transit network and its connections to more distant destinations would not be as important.

In either case, what is most striking about the distribution of older residents relative to rail transit is that they are actually less likely to live in a transit municipality than is the case for the population as a whole. The percent of the general population that lives in a rail-transit municipality is 43.8 percent, a full 4 percentage points greater than for those 55 and over. So older people, who are generally less able to rely on driving everywhere and hence more in need of alternative modes of transportation, are underrepresented in municipalities that host rail transit.
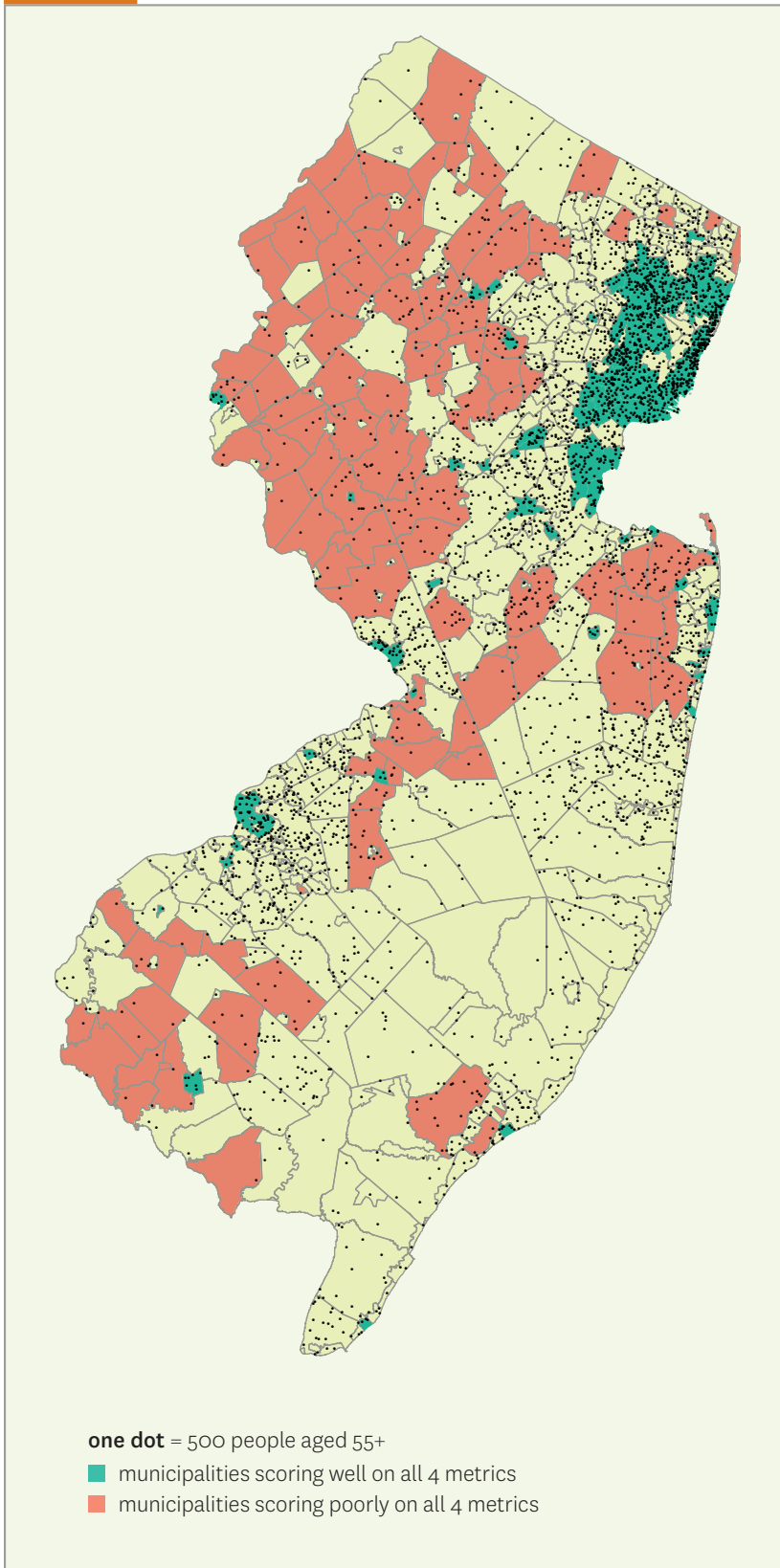
FIGURE 7. **PERCENT OF 55+ POPULATION LIVING IN MUNICIPALITIES CLASSIFIED BY LOCAL BUS STOP DENSITY**
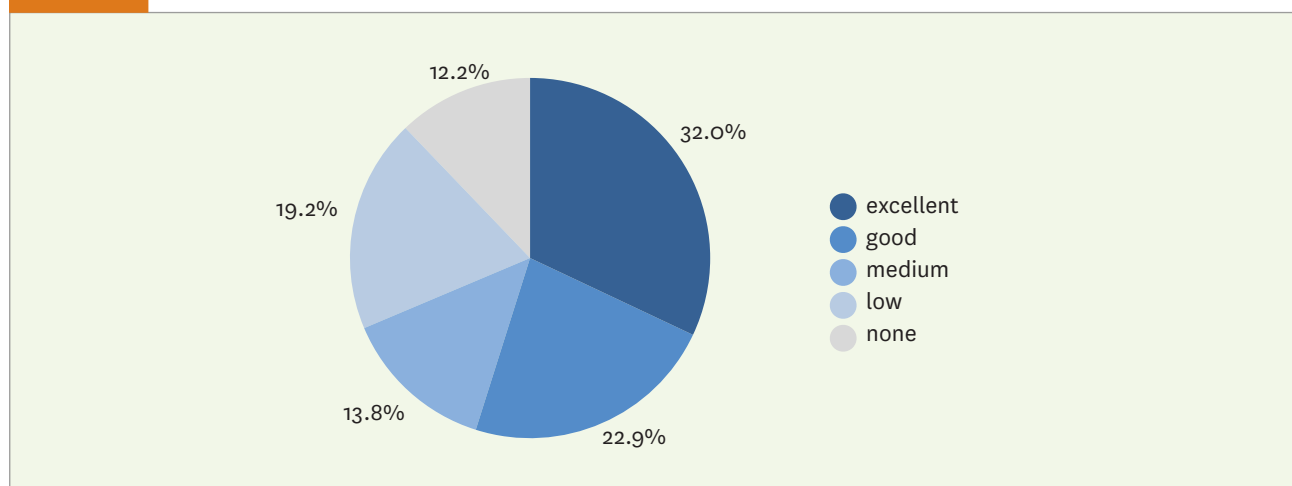
A relatively small proportion of NJ residents aged 55 and older live in municipalities with little or no local bus service.

MISMATCH: HUNDREDS OF THOUSANDS OF OLDER RESIDENTS LIVE IN MUNICIPALITIES WITH DEVELOPMENT CHARACTERISTICS THAT ARE NOT CONDUCIVE TO AGING IN PLACE

one dot = 500 people aged 55+
- 🟩 municipalities scoring well on all 4 metrics
- 🟥 municipalities scoring poorly on all 4 metrics

The same is also true for buses. While 54.9 percent of residents aged 55 or older live in municipalities with either good or excellent local bus service, the corresponding percentage in the general population is 58.6, almost four percentage points higher. This underrepresentation of older people in bus-friendly places is perhaps more problematic than is the case for rail transit. For people who are no longer working, rail transit's usefulness as an alternative to driving is mainly for occasional trips that are discretionary in nature, like visiting regional cultural or recreational destinations. Local bus transportation, in contrast, is more likely to be important for more frequent and pressing trip purposes. It might thus seem desirable that older residents who are more likely to be reliant on public transportation should be more concentrated in municipalities with good local bus service, as compared to the general population, but in fact the opposite is true.

Most and least aging-friendly places: On the New Jersey Future website[14] can be found a table of every municipality in New Jersey and its values and ranks on each of the four aging-friendliness metrics. Municipalities are sorted first by the number of metrics on which they score well, with the most aging-friendly group (those that score well on all four metrics) appearing first. They are sorted alphabetically by county within groups having the same scores.

Good news: 31.3 percent of all New Jersey residents aged 55 or older live in one of the 107 municipalities that score well on all four aging-friendliness development metrics. Bad news: 13.1 percent – almost 300,000 people – live in one of the 109 municipalities that score poorly on all four. And the remaining 55.5 percent live in one of the 350 municipalities that score poorly or in the middle of the pack on at least one metric. Many of these hundreds of thousands of older residents will find themselves increasingly isolated in a car-dependent landscape as their ability to drive diminishes with time.

The places that are the most aging-friendly from the standpoint of their development patterns are the 107 municipalities that score well on all four characteristics. These places: 1) fall in the top three net activity density categories ("urban," "small city/urban suburb," and "dense suburban/small town"), 2) contain at least one mixed-use center, 3) have at least "good" road density, and 4) have at least "good" local bus service. Together, these 107 municipalities host nearly one-third (31.3 percent) of all New Jersey residents aged 55 or older. **(See Figure 8.)** This is certainly good news, although older people are actually underrepresented in these places – these same municipalities account for 36.5 percent of the state's total population.

The larger problem is at the other end of the scale, in the 109 municipalities that score poorly on all four aging-friendliness metrics. These places: 1) score in the two lowest net activity density categories ("large-lot" and "low-density suburban"), 2) do not contain a mixed-use center, 3) have no better than "medium" road density (fewer than 10 route-miles of road per square mile), and 4) have either a "low" level of local bus service or none at all. Together, these municipalities contain 13.1 percent of New Jerseyans over the age of 55, or slightly more than one in eight. This translates to almost 300,000 older residents living in places where all four metrics point to the near impossibility of getting around by any means other than driving. These older residents may find themselves increasingly isolated in a car-dependent landscape as their ability to drive diminishes with time.

This 13.1 percent can actually be thought of as a lower bound on the percent of older residents who are likely to have difficulty getting around without a car, or without driving on busy regional roads, because this group of 109 municipalities constitutes the worst case. Keep in mind that there are 350 other municipalities somewhere in the middle – places that scored well on some aging-friendliness metrics but poorly on others, or that scored in the middle of the pack on all of them. There are at least some aspects of these places' development patterns that are likely to cause problems for residents with limited mobility, and together they are home to 55.6 percent of all New Jerseyans 55 or older. This is not a small issue.

Conclusions

THE RESULTS DESCRIBED in the previous section clearly indicate a looming problem. Large proportions of New Jersey residents aged 55 or older live in municipalities that have low building densities that put destinations far apart; no functioning mixed-use downtown; poor street connectivity that forces people to drive; or little or no local bus service. More than one out of every eight older New Jerseyans lives in a municipality that scores poorly on all four of these measures.

In other words, New Jersey already has hundreds of thousands of older residents who are at risk of being isolated in places that do not lend themselves to getting around by any means other than driving. And this number is only likely to get bigger as the ranks of older New Jerseyans continue to swell. What can be done to address this spatial mismatch?

One strategy is to examine the places whose built forms already lend themselves to helping older residents get around easily, and assess their capacity to absorb more such people. While some places may be aging-friendly at the neighborhood scale, with compact, mixed-use, and walkable land-use patterns, there is no guarantee that they are similarly aging-friendly at the level of individual housing units. That is, they may be undersupplied with the types of housing that older residents want or need – homes with smaller yards, fewer bedrooms, only one story, etc. Some of these places may also have high housing prices in general, putting them out of the range of affordability for many. (See the Focus on Bergen and Passaic Counties supplement for a discussion of some of the other factors that affect quality of life for older residents.) A concerted effort would need to be made on the part of these municipalities to make their housing supplies more aging-friendly, via such efforts as ensuring that their zoning allows for apartment buildings, townhouses, duplexes, accessory apartments, and other housing types that appeal particularly to older residents. They could also allow and encourage the subdivision of existing buildings into multi-unit housing, whether through the addition of a "granny flat" to an existing home, the partition of a large single-family house into multiple units, or the conversion of a non-residential building into residential use.

Another strategy is to look at the places that do not score well on the four aging-friendliness metrics we have outlined here and consider whether some of them might be retrofitted to become more amenable. It is important to consider retrofitting options, because it is not realistic to expect all of the hundreds of thousands of older people currently living in car-dependent places to be able to relocate to a more pedestrian-friendly neighborhood. Endowing a low-density, single-use, automobile-centric municipality with a mixed-use, pedestrian-friendly town center will not happen overnight, but plenty of examples from around New Jersey and the rest of the country can point toward how a municipality can become incrementally more walkable and center–based. For example, infill housing development can be built on surface parking lots, or aging commercial strip-malls can be transformed into mixed-use centers that front directly on the street and create a pleasant pedestrian experience. Such changes will ultimately be good for mobility-impaired older residents who might otherwise be stranded in these places – and good for any of these places' younger residents who would welcome the opportunity to spend less of their time in the car.

Of course, even the places that score well on all four of New Jersey Future's development-related metrics and are well supplied with smaller housing units that are better suited to older people's housing needs may still require further attention if they are to become aging-friendly in all respects. For example, a place with a well-connected street grid that might otherwise facilitate walking could still end up forcing most people into their cars if its streets lack sidewalks, or if the streets are wide and their lane geometry encourages high-speed traffic, making them unsafe to cross on foot. Another town with a traditional downtown and good pedestrian design might nonetheless have its advantages undermined by a high crime rate that deters older (and younger) residents from going anywhere on foot. Investigating some of these other variables, and looking at how well the aging-friendly municipalities identified in this report actually score on them, offers a potential avenue for future research.

Appendix A – "Gray Ghettoes"

Shaded cells are those in which the percent of the municipal population that falls in that age group exceeds the statewide percent in that age group by at least half. Municipalities are sorted in descending order of the percent of the population that is 55 years old or older.

county	municipality name	2010 Census total population	55 and older	55 to 64	65 to 84	85 and older	percent 55 and older	percent 55 to 64	percent 65 to 84	percent 85 and older
Cape May	Cape May Point borough	291	241	79	139	23	82.8%	27.1%	47.8%	7.9%
Ocean	Mantoloking borough	296	239	98	131	10	80.7%	33.1%	44.3%	3.4%
Ocean	Manchester township	43,070	28,012	6,411	17,367	4,234	65.0%	14.9%	40.3%	9.8%
Cape May	Avalon borough	1,334	849	309	466	74	63.6%	23.2%	34.9%	5.5%
Bergen	Rockleigh borough	531	332	29	139	164	62.5%	5.5%	26.2%	30.9%
Cape May	Stone Harbor borough	866	531	171	303	57	61.3%	19.7%	35.0%	6.6%
Ocean	Long Beach township	3,051	1,868	646	1,103	119	61.2%	21.2%	36.2%	3.9%
Camden	Tavistock borough	5	3	0	3	0	60.0%	0.0%	60.0%	0.0%
Ocean	Harvey Cedars borough	337	199	58	132	9	59.1%	17.2%	39.2%	2.7%
Ocean	Barnegat Light borough	574	338	101	219	18	58.9%	17.6%	38.2%	3.1%
Ocean	Surf City borough	1,205	703	238	389	76	58.3%	19.8%	32.3%	6.3%
Ocean	Lavallette borough	1,875	1,091	334	644	113	58.2%	17.8%	34.3%	6.0%
Ocean	Berkeley township	41,255	23,870	5,974	14,215	3,681	57.9%	14.5%	34.5%	8.9%
Atlantic	Longport borough	895	516	179	284	53	57.7%	20.0%	31.7%	5.9%
Sussex	Walpack township	16	9	5	3	1	56.3%	31.3%	18.8%	6.3%
Cape May	Sea Isle City city	2,114	1,181	498	601	82	55.9%	23.6%	28.4%	3.9%
Ocean	Bay Head borough	968	516	183	290	43	53.3%	18.9%	30.0%	4.4%
Cape May	West Cape May borough	1,024	513	221	250	42	50.1%	21.6%	24.4%	4.1%
Atlantic	Margate City city	6,354	3,162	1,147	1,703	312	49.8%	18.1%	26.8%	4.9%
Cape May	North Wildwood city	4,041	2,010	775	1,109	126	49.7%	19.2%	27.4%	3.1%
Ocean	Ship Bottom borough	1,156	561	228	285	48	48.5%	19.7%	24.7%	4.2%
Burlington	Southampton township	10,464	5,056	1,709	2,831	516	48.3%	16.3%	27.1%	4.9%
Middlesex	Monroe township	39,132	18,862	5,236	10,856	2,770	48.2%	13.4%	27.7%	7.1%
Monmouth	Interlaken borough	820	393	175	178	40	47.9%	21.3%	21.7%	4.9%
Cape May	Ocean City city	11,701	5,568	2,097	2,892	579	47.6%	17.9%	24.7%	4.9%
Monmouth	Sea Girt borough	1,828	866	320	476	70	47.4%	17.5%	26.0%	3.8%
Cape May	West Wildwood borough	603	278	111	148	19	46.1%	18.4%	24.5%	3.2%
Ocean	Seaside Park borough	1,579	710	288	351	71	45.0%	18.2%	22.2%	4.5%
Monmouth	Spring Lake borough	2,993	1,338	517	724	97	44.7%	17.3%	24.2%	3.2%
Warren	White township	4,882	2,150	740	1,202	208	44.0%	15.2%	24.6%	4.3%
Monmouth	Deal borough	750	330	115	179	36	44.0%	15.3%	23.9%	4.8%
Ocean	Beach Haven borough	1,170	506	213	250	43	43.2%	18.2%	21.4%	3.7%
Atlantic	Weymouth township	2,715	1,138	401	675	62	41.9%	14.8%	24.9%	2.3%
Cape May	Wildwood Crest borough	3,270	1,370	506	740	124	41.9%	15.5%	22.6%	3.8%
Ocean	Ocean township	8,332	3,487	1,450	1,874	163	41.9%	17.4%	22.5%	2.0%
Bergen	Saddle River borough	3,152	1,308	537	622	149	41.5%	17.0%	19.7%	4.7%
Monmouth	Spring Lake Heights borou	4,713	1,945	727	1,005	213	41.3%	15.4%	21.3%	4.5%
Burlington	Mansfield township	8,544	3,508	1,126	2,084	298	41.1%	13.2%	24.4%	3.5%
Monmouth	Avon-by-the-Sea borough	1,901	780	325	395	60	41.0%	17.1%	20.8%	3.2%
Cape May	Cape May city	3,607	1,465	468	852	145	40.6%	13.0%	23.6%	4.0%
Monmouth	Monmouth Beach borough	3,279	1,261	556	623	82	38.5%	17.0%	19.0%	2.5%
Bergen	Alpine borough	1,849	710	357	317	36	38.4%	19.3%	17.1%	1.9%
Bergen	Englewood Cliffs borough	5,281	2,017	745	1,090	182	38.2%	14.1%	20.6%	3.4%
Ocean	Barnegat township	20,936	7,980	2,934	4,598	448	38.1%	14.0%	22.0%	2.1%
Essex	Cedar Grove township	12,411	4,726	1,779	2,195	752	38.1%	14.3%	17.7%	6.1%
Morris	Harding township	3,838	1,459	654	706	99	38.0%	17.0%	18.4%	2.6%
Atlantic	Brigantine city	9,450	3,588	1,532	1,829	227	38.0%	16.2%	19.4%	2.4%
Cumberland	Greenwich township	804	304	159	126	19	37.8%	19.8%	15.7%	2.4%
Camden	Audubon Park borough	1,023	386	120	248	18	37.7%	11.7%	24.2%	1.8%
Ocean	Island Heights borough	1,673	627	332	259	36	37.5%	19.8%	15.5%	2.2%
Essex	Roseland borough	5,819	2,174	892	1,125	157	37.4%	15.3%	19.3%	2.7%
Cumberland	Downe township	1,585	592	268	289	35	37.4%	16.9%	18.2%	2.2%
Salem	Elsinboro township	1,036	385	174	188	23	37.2%	16.8%	18.1%	2.2%
Union	Mountainside borough	6,685	2,484	899	1,222	363	37.2%	13.4%	18.3%	5.4%
Monmouth	Tinton Falls borough	17,892	6,605	2,032	2,910	1,663	36.9%	11.4%	16.3%	9.3%
Cape May	Lower township	22,866	8,357	3,526	4,257	574	36.5%	15.4%	18.6%	2.5%
Somerset	Watchung borough	5,801	2,091	866	988	237	36.0%	14.9%	17.0%	4.1%
Salem	Pilesgrove township	4,016	1,447	604	624	219	36.0%	15.0%	15.5%	5.5%
Monmouth	Allenhurst borough	496	178	80	81	17	35.9%	16.1%	16.3%	3.4%
Ocean	Little Egg Harbor township	20,065	7,197	2,866	3,850	481	35.9%	14.3%	19.2%	2.4%
Hunterdon	Lambertville city	3,906	1,398	720	582	96	35.8%	18.4%	14.9%	2.5%
Morris	Pequannock township	15,540	5,561	1,696	2,696	1,169	35.8%	10.9%	17.3%	7.5%
Hunterdon	Delaware township	4,563	1,619	884	655	80	35.5%	19.4%	14.4%	1.8%

Appendix A – "Gray Ghettoes" (cont.)

county	municipality name	2010 Census total population	55 and older	55 to 64	65 to 84	85 and older	percent 55 and older	percent 55 to 64	percent 65 to 84	percent 85 and older
Bergen	Fort Lee borough	35,345	12,474	4,763	6,525	1,186	35.3%	13.5%	18.5%	3.4%
Bergen	Paramus borough	26,342	9,259	3,496	4,499	1,264	35.1%	13.3%	17.1%	4.8%
Morris	Mount Arlington borough	5,050	1,771	740	890	141	35.1%	14.7%	17.6%	2.8%
Atlantic	Ventnor City city	10,650	3,684	1,564	1,792	328	34.6%	14.7%	16.8%	3.1%
Monmouth	Loch Arbour village	194	67	37	27	3	34.5%	19.1%	13.9%	1.5%
Passaic	North Haledon borough	8,417	2,876	1,167	1,379	330	34.2%	13.9%	16.4%	3.9%
Cumberland	Hopewell township	4,571	1,559	615	752	192	34.1%	13.5%	16.5%	4.2%
Warren	Frelinghuysen township	2,230	758	362	300	96	34.0%	16.2%	13.5%	4.3%
Bergen	Washington township	9,102	3,068	1,253	1,597	218	33.7%	13.8%	17.5%	2.4%
Bergen	Rochelle Park township	5,530	1,856	754	875	227	33.6%	13.6%	15.8%	4.1%
Essex	Fairfield township	7,466	2,505	977	1,297	231	33.6%	13.1%	17.4%	3.1%
Bergen	Norwood borough	5,711	1,907	763	917	227	33.4%	13.4%	16.1%	4.0%
Camden	Chesilhurst borough	1,634	543	221	263	59	33.2%	13.5%	16.1%	3.6%
Mercer	Pennington borough	2,585	855	395	333	127	33.1%	15.3%	12.9%	4.9%
Monmouth	Sea Bright borough	1,412	466	261	196	9	33.0%	18.5%	13.9%	0.6%
Bergen	Park Ridge borough	8,645	2,847	1,186	1,337	324	32.9%	13.7%	15.5%	3.7%
Hunterdon	East Amwell township	4,013	1,321	753	494	74	32.9%	18.8%	12.3%	1.8%
Salem	Carneys Point township	8,049	2,649	1,141	1,133	375	32.9%	14.2%	14.1%	4.7%
Morris	Boonton township	4,263	1,399	629	590	180	32.8%	14.8%	13.8%	4.2%
Monmouth	Roosevelt borough	882	288	167	103	18	32.7%	18.9%	11.7%	2.0%
Atlantic	Linwood city	7,092	2,311	1,026	1,008	277	32.6%	14.5%	14.2%	3.9%
Burlington	Riverton borough	2,779	902	404	329	169	32.5%	14.5%	11.8%	6.1%
Essex	West Caldwell township	10,759	3,487	1,393	1,544	550	32.4%	12.9%	14.4%	5.1%
Essex	Verona township	13,332	4,317	1,747	2,041	529	32.4%	13.1%	15.3%	4.0%
Morris	Mendham borough	4,981	1,595	649	782	164	32.0%	13.0%	15.7%	3.3%
Atlantic	Port Republic city	1,115	357	216	122	19	32.0%	19.4%	10.9%	1.7%
Bergen	Emerson borough	7,401	2,359	890	1,109	360	31.9%	12.0%	15.0%	4.9%
Union	Clark township	14,756	4,599	1,865	2,188	546	31.2%	12.6%	14.8%	3.7%
Burlington	Pemberton borough	1,409	439	252	169	18	31.2%	17.9%	12.0%	1.3%
Morris	Hanover township	13,712	4,272	1,786	1,980	506	31.2%	13.0%	14.4%	3.7%
Camden	Cherry Hill township	71,045	22,115	9,531	10,377	2,207	31.1%	13.4%	14.6%	3.1%
Ocean	Brick township	75,072	23,350	9,882	11,128	2,340	31.1%	13.2%	14.8%	3.1%
Union	Springfield township	15,817	4,911	2,142	2,248	521	31.0%	13.5%	14.2%	3.3%
Monmouth	Shrewsbury township	1,141	353	148	131	74	30.9%	13.0%	11.5%	6.5%
Middlesex	Cranbury township	3,857	1,190	548	516	126	30.9%	14.2%	13.4%	3.3%
Monmouth	Shrewsbury borough	3,809	1,174	503	490	181	30.8%	13.2%	12.9%	4.8%
Bergen	Fair Lawn borough	32,457	9,978	4,673	4,287	1,018	30.7%	14.4%	13.2%	3.1%
Camden	Haddon Heights borough	7,473	2,263	1,068	960	235	30.3%	14.3%	12.8%	3.1%
Camden	Voorhees township	29,131	8,814	3,999	3,713	1,102	30.3%	13.7%	12.7%	3.8%
Camden	Haddon township	14,707	4,418	1,882	2,048	488	30.0%	12.8%	13.9%	3.3%
Bergen	Wyckoff township	16,696	5,012	2,235	2,242	535	30.0%	13.4%	13.4%	3.2%
Warren	Lopatcong township	8,014	2,404	955	1,139	310	30.0%	11.9%	14.2%	3.9%
Bergen	Cresskill borough	8,573	2,566	1,078	1,158	330	29.9%	12.6%	13.5%	3.8%
Morris	Denville township	16,635	4,967	2,349	2,064	554	29.9%	14.1%	12.4%	3.3%
Bergen	Woodcliff Lake borough	5,730	1,709	770	736	203	29.8%	13.4%	12.8%	3.5%
Union	Cranford township	22,625	6,725	2,838	3,082	805	29.7%	12.5%	13.6%	3.6%
Union	Berkeley Heights township	13,183	3,914	1,613	1,802	499	29.7%	12.2%	13.7%	3.8%
Sussex	Branchville borough	841	249	108	115	26	29.6%	12.8%	13.7%	3.1%
Sussex	Newton town	7,997	2,365	884	1,028	453	29.6%	11.1%	12.9%	5.7%
Salem	Mannington township	1,806	534	219	248	67	29.6%	12.1%	13.7%	3.7%
Morris	Morris Plains borough	5,532	1,615	697	741	177	29.2%	12.6%	13.4%	3.2%
Gloucester	Pitman borough	9,011	2,624	1,099	1,076	449	29.1%	12.2%	11.9%	5.0%
Bergen	Saddle Brook township	13,659	3,972	1,713	1,833	426	29.1%	12.5%	13.4%	3.1%
Burlington	Moorestown township	20,726	5,982	2,622	2,556	804	28.9%	12.7%	12.3%	3.9%
Bergen	Midland Park borough	7,128	2,038	896	913	229	28.6%	12.6%	12.8%	3.2%
Essex	West Orange township	46,207	13,169	5,807	5,612	1,750	28.5%	12.6%	12.1%	3.8%
Camden	Berlin borough	7,588	2,146	865	1,042	239	28.3%	11.4%	13.7%	3.1%
Bergen	Allendale borough	6,505	1,812	867	695	250	27.9%	13.3%	10.7%	3.8%
Union	Kenilworth borough	7,914	2,199	966	986	247	27.8%	12.2%	12.5%	3.1%
Essex	Caldwell borough	7,822	2,154	897	1,014	243	27.5%	11.5%	13.0%	3.1%
Union	Fanwood borough	7,318	1,861	840	785	236	25.4%	11.5%	10.7%	3.2%
Camden	Pine Valley borough	12	3	3	0	0	25.0%	25.0%	0.0%	0.0%
Monmouth	Englishtown borough	1,847	386	199	128	59	20.9%	10.8%	6.9%	3.2%
	New Jersey total	8,791,894	2,232,158	1,046,165	1,006,382	179,611	25.4%	11.9%	11.4%	2.0%

Appendix B – Detailed Methodology
for Determination of Centers

All municipalities will be assigned to one of five categories, with respect to whether or not they contain a mixed-use center:

- **center** = the entire municipality is considered to be a center

- **contains ≥ 1 center** = the municipality definitely contains a center; it may contain multiple centers, and/or it may also contain some non-center territory, but the situation cannot be fully determined from available data

- **contains single center** = the municipality contains a single State Plan- (or Pinelands- or Highlands-) designated center and also some non-center territory

- **contains multiple centers** = the municipality contains multiple State Plan-designated centers and also some non-center territory

- **no centers identified** = municipality does not contain a mixed-use center of any kind that can be identified from available data

We begin with the centers identified by the State Plan process, plus designated centers in the Pinelands and existing centers (but not future centers) identified in the Highlands. For these officially delineated centers, we will also consider the percent of the municipality's total land area that is covered by the center. (Acreages for both types of center were provided by the state Office of Planning Advocacy.) This will allow us to distinguish between those cases in which an entire municipality functions as a center and those in which a larger municipality contains a center (and possibly multiple centers) but also some non-center territory.   Think of Newark as an example: downtown Newark certainly looks like a center, but is it accurate to describe the entire 26-square-mile city as a single center? There are plenty of residential neighborhoods in Newark that are well beyond walking distance from Penn Station, or from anything else resembling a shopping district.

In examining the data on center acreages in order to try to establish a maximum area for a functional center, a natural break point of around 2,000 acres suggested itself. Above this point, based on familiarity with specific municipalities, it seemed more appropriate to say the municipality contains a center, rather than to describe the entire municipality as a center.   As it happens, 2,000 acres translates almost exactly into the area of a circle of radius 1 mile. This makes for a good intuitive definition of a center – a mixed-use downtown core plus anything within a mile of it in any direction. Any municipality with center-like characteristics that is less than 2,000 acres in total area will thus be treated as a center in its entirety, while municipalities above this size will be treated as containing a center but possibly also some non-center territory.

The distinction among the types of municipalities that comprise or contain one or more State Plan (or Pinelands or Highlands) centers is established as follows:

- If a municipality has more than two-thirds of its land area accounted for by a single designated State Plan center (or Pinelands or Highlands center) and is smaller than 2,000 acres, then we consider it to be a center unto itself. There are 47 such municipalities, and in practice almost all of them have more than 90% of their area covered by the State Plan designation; the only exceptions are Riverside, Riverton, Manasquan, Seaside Heights, Beverly, and Branchville, and in these cases the non-center territory consists mainly of undevelopable land. These municipalities are classified with the "**center**" label.

- If a municipality has more than two-thirds of its land area accounted for by a single designated center (even up to 100 percent) but the municipality is larger than 2,000 acres, it will be labeled as "**contains ≥ 1 center**". Such municipalities are large enough that they may contain multiple centers (like Newark), or they may contain a single center plus some territory that is not functionally integrated with the center (like Newton or Burlington city). It is not possible to discern the difference between these two scenarios using the data available. It also cannot be assumed that the entire municipality necessarily consists of center-like territory. All that can be deduced is that the municipality includes – but may not be totally made up of – at least one center, and possibly more than one.

- If a municipality contains a single designated center, but the center accounts for less than two-thirds of the municipal land area (even if the total municipal land area is less than 2,000 acres), it will be labeled "**contains single center**."

- If a municipality contains multiple designated centers, but as a group the centers constitute less than two-thirds of the total municipal land area, it will be labeled "**contains multiple centers**." (There is no case where a municipality contains multiple centers that together make up more than two-thirds of total land area.)

To account for the fact that many municipalities opted not to participate in the State Plan's center designation process but may still contain a mixed-use center, we also looked at municipalities hosting a Business Improvement District (BID) or a "Main Street" or "Downtown" organization. The presence of one or more of these organizations signals that local business owners are sufficiently aware that they are in a walkable downtown that they have proactively formed some sort of downtown business association. Note that these districts are concerned only with the retail area of a municipality, however, and are not attempting to delineate centers as holistically as did the State Plan process. Their host municipalities thus cannot be classified as confidently as those with State Plan-designated centers.

Municipalities hosting a "Downtown"-type organization are classified as follows:

- If a municipality does not contain a designated State Plan center but *does* host a Downtown organization, and the municipality is less than 2,000 acres in area, it will be labeled "**center,**" under the assumption that the municipality is small enough that the downtown district is able to serve as the center for the entire municipality. (The only exception is Haddon Twp., which is small enough to meet the threshold but comprises three non-contiguous pieces and must therefore be classified as "contains ≥ 1 center.")

- If a municipality hosts a Downtown organization but the municipality is more than 2,000 acres in area, it will be labeled "**contains ≥ 1 center**." Similar to the geographically large State Plan-designated centers, these municipalities are large enough that they may contain multiple downtownsor some non-center-like territory.

If a municipality does not contain any territory that is part of a State Plan- (or Pinelands- or Highlands-) designated center and also does not host a Downtown organization, it can still qualify as hosting a mixed-use center if it meets the following criteria:

- Net activity density is at least 8,000 people + jobs per square mile; AND

- Population is at least 500 (this disqualifies Teterboro, which is an anomaly); AND

- Land area is either:

- at least 500 acres, OR

- less than 500 acres but the number of jobs exceeds the number of employed residents (the job requirement weeds out some very dense but geographically small and overwhelmingly residential municipalities that function more like urban residential neighborhoods whose centers are elsewhere)

If a municipality meeting these criteria is smaller than 2,000 acres, it will be labeled "**center**" (except South Hackensack, which meets the size threshold but is made up of three non-contiguous pieces and must therefore be classified as "**contains ≥ 1 center**"). If a municipality meeting these criteria is larger than 2,000 acres, it will be labeled as "contains ≥ 1 center."

If a municipality does not meet any of the above criteria, it will be labeled "**no centers identified**." This does not necessarily mean that no center-like part of town exists, just that there is no further systematic and objective way of identifying it.

Endnotes

1   AARP's AARP Public Policy Institute's 2011 *State Housing Profile* may be found at http://assets.aarp.org/rgcenter/ppi/liv-com/AARP-HouProf_2011-NJs.pdf

2   Publisher's page for Jeff Speck's *Walkable City: How Downtown Can Save America, One Step at a Time* may be found at http://us.macmillan.com/walkablecity/JeffSpeck

3   "Why Interning at 60 is the New Retirement Plan," *Atlantic Cities*, September 2013: http://www.theatlantic.com/business/archive/2013/09/work-forever-why-interning-at-60-is-the-new-retirement-plan/279381/

4   As the AARP's Amy Levner observes in a recent MSN Money article, available at http://money.msn.com/retirement/why-seniors-are-returning-to-cities, about the benefits of making a place more aging-friendly: "Along the way, better transportation hubs, increased walkability and other improvements will benefit not just those 65 and up, but everyone."

5   The Jan. 1, 2013, merger of Princeton Borough and Princeton Township reduced the number of New Jersey municipalities from 566 to 565. But since the data on which this report is based all pre-date 2013, the report's findings are based on 566 data points.

6   These state- and national-level statistics are from the 2012 one-year American Community Survey (ACS). Unless otherwise indicated, all other population statistics in this report pertain to the municipal level and are from the 2010 Census, which provides much more reliable municipal-level estimates than the ACS.

7   The population aged 65 to 84 actually experienced a slightly lower growth rate than the state as a whole because of the numerically smaller generation that preceded the Baby Boom aging into this range, and the larger generation consisting of the Baby Boomers' parents aging out of it.

8   "The Tragedy of Modern Retirement Communities," A*tlantic Cities*, October 2012: http://www.theatlanticcities.com/arts-and-lifestyle/2012/10/tragedy-modern-retirement-communities/3420/

9   Computed for New Jersey Future by Shivi Prasad at Legal Services of New Jersey, using Census microdata.

10   Ideally, the aging-friendliness of the built environment would be measured at the neighborhood level (often approximated using Census tracts), but data for any variable not produced by the Census Bureau are often not available at that detailed a level of geography.

11   The New Jersey State Development and Redevelopment Plan may be found at http://www.nj.gov/state/planning/plan.html

12   The Department of Community Affairs maintains a list of all Improvement Districts in the state.

The DCA also manages the Main Street New Jersey program; for a list of participant municipalities, see http://www.state.nj.us/dca/divisions/dhcr/offices/msnjdistricts.html.   We   rely here on the assumption that forming either type of organization is impractical to businesses in a more spread-out suburban retail environment. That is, we assume that the DCA lists do not include any false positives – a municipality where some sort of "downtown" organization has been formed but which does not actually have a mixed-use downtown.

13   Road mileages by municipality were extracted from a database maintained by the New Jersey Department of Transportation.   Municipal   totals   exclude   limited-access highways and their attendant ramps, which are not part of the "local" road network.

14   The full list of municipalities and how they rank on aging-friendliness criteria may be found at http://njfuture.org/placestoage.

About Us

NEW JERSEY FUTURE is a nonprofit, nonpartisan organization that brings together concerned citizens and leaders to promote responsible land-use policies at both the state and local levels. The organization employs original research, analysis and outreach efforts to build coalitions and drive change to revitalize cities and towns, protect natural lands and farms, provide more transportation choices beyond cars, expand access to safe and affordable neighborhoods and fuel a prosperous economy. More recently, New Jersey Future has expanded its work to include local engagement and implementation, most notably in Sandy-affected communities

The Author

TIM EVANS is responsible for the original research and data analysis that support New Jersey Future's policy development. He regularly documents his research results in a variety of products, including full-length research reports and the organization's twice-monthly Future Facts electronic newsletter. He also ensures that all of New Jersey Future's products and media communications are quantitatively accurate and defensible. Tim frequently provides data and advice to colleague organizations, serving as an informal research consultant to the smart growth community at large. His analysis and commentary have been featured by a wide range of state and national media outlets. Tim holds a B.S. in mathematics from Ursinus College, an M.S. in statistics from the University of Virginia, and a master's in city and regional planning (M.C.R.P.) from the Bloustein School of Planning and Public Policy at Rutgers University. Prior to joining New Jersey Future, Tim worked for six years as a mathematical statistician for the Bureau of the Census in Washington, D.C