



# Senior Housing Study

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## **Executive Summary**

The Partnership for Housing Affordability (PHA) was founded by the Richmond Association of REALTORS® in 2004. PHA's mission is to promote affordable housing policies and developments through education, coordination, and leadership. To accomplish this mission, PHA serves as a leading voice on housing related initiatives in the Richmond region, educates policymakers and the community on the impact affordable housing has on the region's competitiveness, and pursues best practices in affordable housing by leading initiatives that are designed to affect change.<sup>1</sup> This report was undertaken to inform business leaders, elected officials, and the development community about the struggles confronting senior homeowners throughout the region, and the actions that can be taken to address and mitigate the issue. This study will serve to demonstrate to developers and community leaders that a market exists for affordable senior housing throughout the region.

Based on this study's findings and implications, policy actions from local governments around the country were analyzed to help the Richmond region capitalize on this market and assist the senior community for years to come. The recommendations developed from peer regions and industry best practices both encourage local governments in the region to:

- Allow for greater density to increase the supply of senior housing;
- Promote existing strategies such as the Livable Homes Tax Credit to enable seniors to properly age in place by remodeling their homes for greater accessibility (e.g. no step entries, wider hallways, etc.);
- Conduct a feasibility study to evaluate the economic tradeoffs associated with provision of affordable units;
- Implement policy and land use regulations that will enable the development of more affordable housing (e.g. accessory dwelling units);
- Incentivize the building community through density bonuses, fee waivers, and expedited processing; and
- Prioritize ancillary policy issues such as transportation and social services to connect senior households to their essential needs and improve their overall quality of life.

<sup>1</sup>Partnership for Housing Affordability. (N.D.) About Us. Retrieved from <https://partnershipaffordablehousing.com/learn-about-us/>.

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**Key Findings**

The results of this study reveal that senior households within the Richmond region are faced with a serious challenge: a significant gap exists between the equity stake of unencumbered senior households and the current market for senior housing. Out of the over 9,000 senior occupied homes that are the subject of this study, 71.8 percent of them are valued below \$200,000. Twenty-one percent of these households are valued at \$99,999 or below. This dynamic is reflected in each locality covered in the report. In Chesterfield and Henrico counties as well as the City of Richmond, the percentage of senior households assessed below \$200,000 is above 70 percent for each of the three localities. Hanover has just below 50 percent of its senior households valued under \$200,000. An analysis at the district level within these localities demonstrates even larger challenges. For example, in the Eighth district of the City of Richmond, 98 percent of the unencumbered senior households are valued at \$199,999 or below. In the Dale District of Chesterfield, 86 percent of senior households are valued at \$199,999 or below.

These findings are coupled with the current market for senior, age-restricted housing within the region. On average, recently constructed age-restricted housing in the Richmond region was listed at approximately \$340,000, a sales price point that makes it financially challenging for most seniors in this study to move to housing that fits their evolving needs without taking on a mortgage. Furthermore, apart from the gap between senior equity and the current senior housing market, there is a lack of supply of senior housing in the Richmond region. As a result, many seniors are aging in place not by choice, but rather due to financial constraints.

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## Introduction

By the year 2030, 132 million people will be 50 years or older. The age cohort with the highest concentration will be adults aged 65-74, who are currently the younger class of baby boomers. This age group is projected to jump from 21.7 million in 2010 to 38.6 million in 2030.<sup>2</sup> By 2030, one in five people in the United States will be 65 or over, compared to one in seven today. This rapid growth will have major implications for housing. Household sizes begin to shift after age 50 and, as a result, roughly 25% of households in their 50s will consist of a single person. Furthermore, between 2015 and 2035, individuals living alone aged 75 and over will increase from 6.9 million to 13.4 million, with the large majority being women.<sup>3</sup>

Future senior populations will also be more diverse than in recent generations, fueled by decades of immigration. This is critical because the housing preferences of individuals aged 65 and over differ among various ethnic groups. For example, the Hispanic and Asian populations are more likely than black or white populations to live in other family members' households. These living arrangements, with at least three or more generations sharing a home, have already doubled to about 2.2 million.<sup>4</sup> Increasing diversity means multigenerational living will be a main fixture in senior housing for years to come.

Baby Boomers (1946-1964) also differ from previous generations in the sense that they are more willing to take on a mortgage or even upgrade in the later stages of their lives. A 2013 Demand Institute study found that Boomers will "spend \$1.9 trillion on new home purchases"<sup>5</sup> in the coming years. The study also revealed that 46 percent<sup>6</sup> of boomers are seeking homes with more space, and plan to increase housing expenses. On the other hand, the Silent Generation (1925-1945) presents a stark contrast to the boomers and their financial decisions. This generation tends to be characterized as savers, frugal, and risk averse, thus not likely to take on a mortgage or spend a significant portion of their savings. This generational distinction will be important to consider later in the report.

<sup>2</sup>Baker, Kermit. *Housing America's Older Adults*. Edited by Marcia Fernald. Joint Center for Housing Studies of Harvard University, 2014. *Housing America's Older Adults*.

<sup>3</sup>Burbank, Jeremy. *Baby Boomers & Their Homes: On Their Own Terms*. Demand Institute, 2014. *Baby Boomers & Their Homes: On Their Own Terms*.

Nevertheless, the majority of baby boomers intend to age in place, with no plans of ever moving again. Aging in place is understandably a preferred choice for many seniors. There are certain attachments such as familial bonds, places of worship, and familiarity with the area, all of which can make moving seem like a risk not worth taking. Not to mention that the process of moving can prove to be an arduous task that seniors may not have the motivation for. Therefore, it is not uncommon nor unreasonable for seniors to want to remain in houses that they have called home for decades. Unfortunately, the decision of aging in place is not a matter of choice for some seniors. A significant portion of seniors are unable to move to more livable communities and accessible housing due to financial constraints.<sup>7</sup> To make matters worse, much of the older houses that seniors inhabit are not age, accessibility friendly. And despite this being a rather robust, active generation, most boomers (58%) will retire within the next five years.<sup>8</sup>

Additionally, as individuals age, they often experience more health problems. Despite tremendous medical advances, longer life expectancies, and an overall improvement of general health, roughly 25% of adults aged 50 and over have difficulty with mobility, hearing, vision, or cognition.<sup>9</sup> This percentage increases greatly by the age of 85, with 68% affected by some form of disability. And disabilities are more likely to impact minorities and seniors with lower incomes. Thirty-two percent of blacks aged 50 and over are reported to have at least one disability, compared to 25 percent for whites. Also, just under 14 percent of seniors in the highest income group for households (\$75,000+) have at least one disability, compared to 45 percent for those who belong to the lowest income group.<sup>10</sup> All in all, almost three fourths (70 percent) of the adults who reach age 65 will require some form of long term care.<sup>11</sup>

<sup>7-8</sup>*Baby Boomers & Their Homes: On Their Own Terms.*

<sup>9-10</sup>*Housing America's Older Adults.*

<sup>11</sup>"U.S. Unprepared to Meet the Housing Needs of Its Aging Population." AARP Foundation, 2 Sept. 2014

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Disability rates and health concerns are central to any discussion of senior housing. There are certain elements that must be provided within the home and in the community for the senior population to thrive. Five home features that enhance accessibility and livability for aging are: no-step entries, single floor living, wide hallways and doors to accommodate wheelchairs, electrical switches and outlets that can be reached at any height, and lever-style door and faucet handles.<sup>12</sup> Because many seniors live in houses that were constructed over three decades ago or more, their homes are ill suited for them to properly and safely age in place. The demand for accessibility features far outweighs the supply.

Currently, the most common accessibility feature is single-floor living (having a bedroom and bathroom on the same level), which is available in 76 percent of U.S. housing units. Forty-two percent of units have no-step entries, 44 percent with reachable switches and outlets, 8 percent with wide hallways and doorways, and 8 percent have lever-style faucet and door handles. Overall, 90 percent of homes have at least one accessibility feature, while 57 percent have more than one feature. On the other hand, less than 5 percent of homes have all accessibility features.<sup>13</sup> Fortunately, houses constructed since the year 2000 are much more likely to have more accessibility features and are more apt to be accessible.

But as stated previously, a majority of boomers wish to age in place, rather than move to age friendly communities, some by choice and some because of financial burdens. This predicament can strain seniors financially, given the cost of renovating homes for accessibility. For example, the cost to widen one doorway can range between \$800 and \$1,200, while installing a wheelchair ramp can cost \$1,600 and \$3,200.<sup>14</sup> Lastly, there are roughly 5.5 million older households with someone who has mobility issues, but who live in houses without no-step entries.<sup>15</sup>

<sup>12-15</sup>*Housing America's Older Adults.*

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As a result, it is critical to emphasize the importance of affordable housing options for seniors who may find themselves aging in place due to financial circumstances. Despite the appeal of aging in place, there are seniors who would move, if more affordable options were presented and available. Consequently, the primary goal of this study is to determine the need for affordable, accessible housing options for seniors who own their homes unencumbered, but do not wish to continue to age in place. Even if these seniors can sell their residences, these residences often have assessed values far below the sale prices of recently constructed, age-restricted housing. This study seeks to quantify the number of senior households in this situation and the average gap between current household equity and the sale price of age-restricted housing. To meet this objective, it will be important to understand a few key trends of senior population growth. Some questions to consider:

- Are seniors downsizing, aging in place, moving to institutional care?
- What type of housing best suits seniors (accessibility features, single-level, low maintenance, etc.)?
- What is the affordability and availability of senior housing?
- What are the obstacles and policy options that lie ahead?

## **Methodology**

This report presents quantitative data to demonstrate the significant number of unencumbered seniors who are unable to afford senior, age restricted housing throughout the Richmond region. Throughout this report, "seniors" and "older adults" are referred to as the study's main subject. Though the prior section references the baby boom generation in its entirety (ages 53-71 currently), the findings from this study specifically reflect individuals who purchased their homes before January 1, 1977. Hence the homes analyzed throughout the study are over 40 years old and, assuming that the youngest age the seniors in this study were purchasing a home was 25, the youngest seniors in this study are approximately 65 years old. Therefore, the younger edge of the baby boom generation is not represented in the data. Rather, most people in this study group are the older boomers and members of the Silent Generation (born 1925-45).

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To collect this information, data from the Central Virginia Regional Multiple Listing Service was used. From there, tax records, assessment values, settlement dates before 1977, census tracts, and owner status were culled to establish appropriate search criteria. The criteria were then applied to each magisterial district in the City of Richmond as well as Chesterfield, Hanover, and Henrico counties. Once these data were exported, they were then organized by filtering for the assessment values. From there, it was necessary to establish a financial standard to determine the distribution of the home values. As a result, the ranges of \$0-99,999, \$100,000-199,999, \$200,000-299,999, \$300,000-399,999, and \$400,000 and above were selected. It was believed that these five ranges would appropriately stratify the data in a way that was simple, accurate, and large enough to handle the vast amount of numbers.

Throughout the report, the study area is referred to as the "Richmond region." For this study, the "Richmond region" refers to the counties of Chesterfield, Henrico, Hanover, and the City of Richmond. To get a sense of the current marketplace as it pertains to age-restricted communities in the Richmond region, much of the information was obtained from 55places.com. This site obtains its information on age-restricted communities through builders, real estate agents, and community websites.

## **Richmond Region**

Out of the 1.3 million people in the region, roughly 30 percent are age 55 and over.<sup>16</sup> That number will continue to increase. From 2010 to 2015, Chesterfield (3.6%), Hanover, and Henrico (2.6%) all experienced a steady growth in their senior populations, with Hanover seeing the most growth at 4.7 percent. The City of Richmond saw a slight increase (1.6%) over that same time period.<sup>17</sup> These numbers have major implications for the housing market of the Richmond region; because the housing demand is forecasted to grow the most for the 65 and older age cohort, which will account for roughly 62 percent of the housing demand in the region from 2010-2030. A report conducted by PHA projects the number of 65 and over households in the region to increase between 66,000 and 77,000.<sup>18</sup>

<sup>16</sup>Capital Regional Collaborative. (2016). RVA Snapshot Indicator Report.

<sup>17</sup>U.S. Census, American Community Survey, 2011-2015 Estimates.

<sup>18</sup>Partnership for Housing Affordability. (2015). Housing the Richmond Region: Needs, Impediments, and Strategies, pg. 13.

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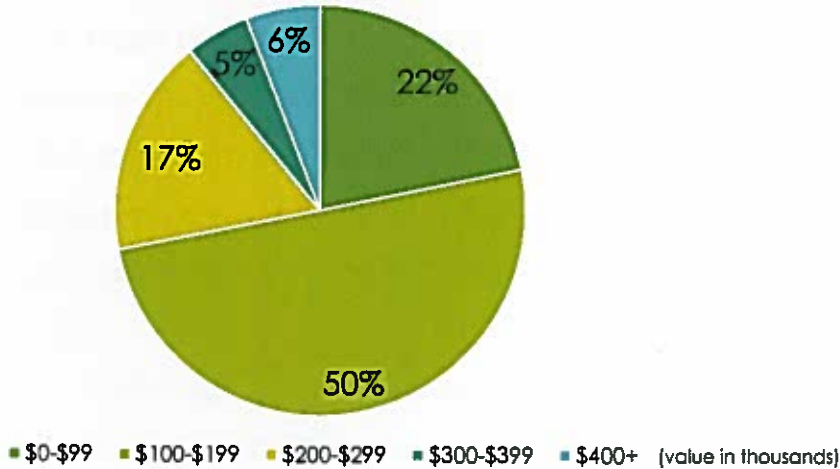
**Table 1**

| Jurisdiction     | %55+ (2010) | %55+ (2015) | % growth (2010-2015) |
|------------------|-------------|-------------|----------------------|
| Chesterfield     | 21.70%      | 25.30%      | 3.60%                |
| Hanover          | 24.70%      | 29.00%      | 4.70%                |
| Henrico          | 23.10%      | 25.70%      | 2.60%                |
| City of Richmond | 21.70%      | 23.30%      | 1.60%                |

As for homeownership, 9,396 senior households in the Richmond region own their homes unencumbered in this study.<sup>19</sup> Almost three fourths (71.8%) of the seniors in this study own a home that is assessed at \$199,999 or less.<sup>20</sup> Only 11 percent of all senior headed households have homes valued at \$300,000 or more. This trend is relatively consistent in every locality in the region except the City of Richmond, which has a higher percentage of seniors with homes that are worth less than \$100,000.

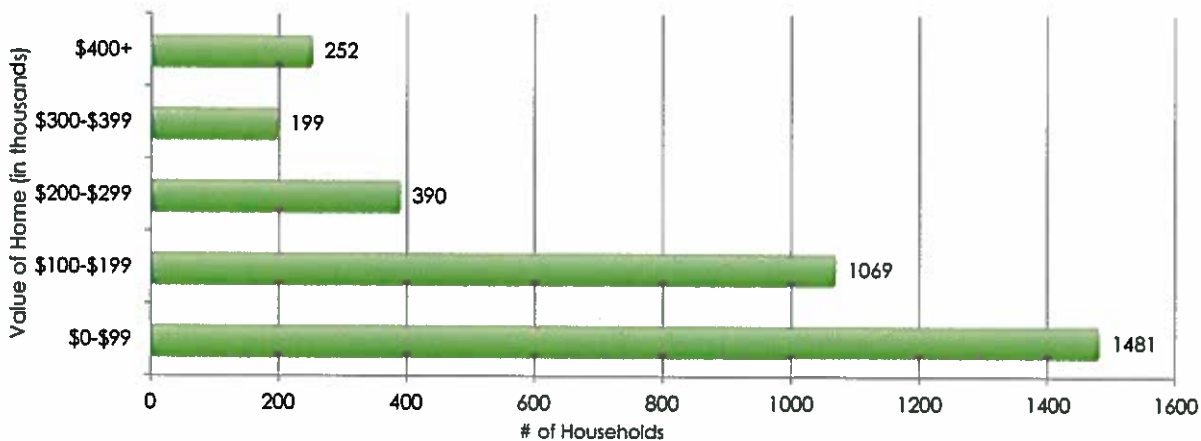
**Table 2**

Richmond Region



**Table 3**

City of Richmond

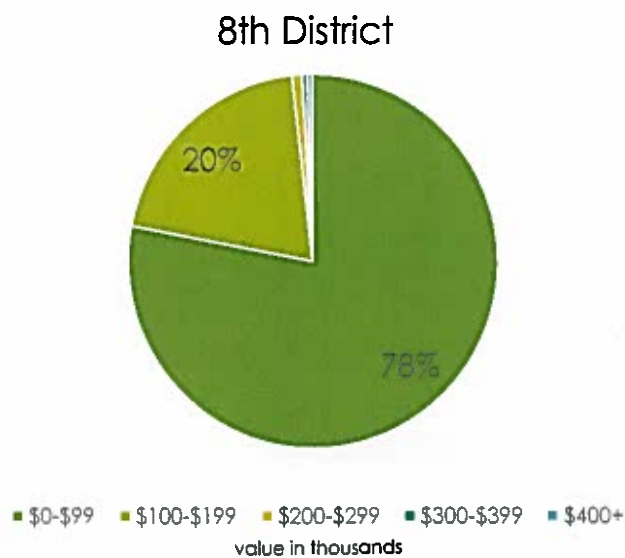
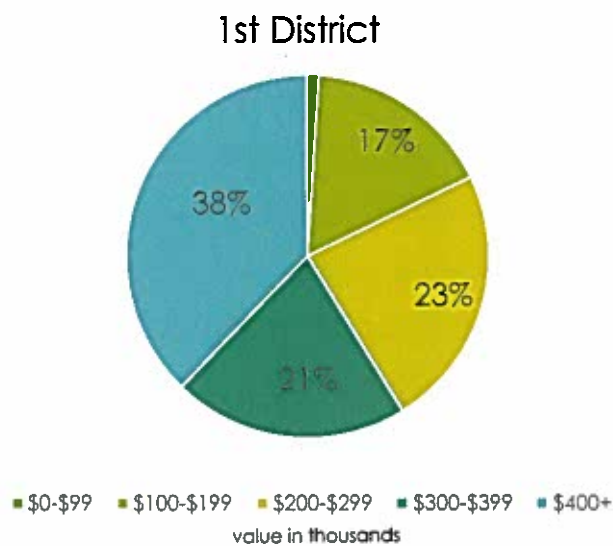


Within the city, 75.2 percent of the senior households are valued at less than \$200,000.<sup>21</sup> And there exist stark contrasts between districts. For example, the First District has 108 (38%) senior households whose homes are valued at \$400,000 or more, while only three seniors in the district have homes that are assessed at \$99,999 or less. Compare that to the Eighth District, which has 359 (78%) senior households valued at \$99,999 or less and only two senior households valued at \$400,000 or more.<sup>22</sup> The two districts are displayed below in tables four and five:<sup>23</sup>

<sup>21-22</sup>CVR MLS.

<sup>23</sup>The data for the remaining districts in the City of Richmond can be found in Appendix A.

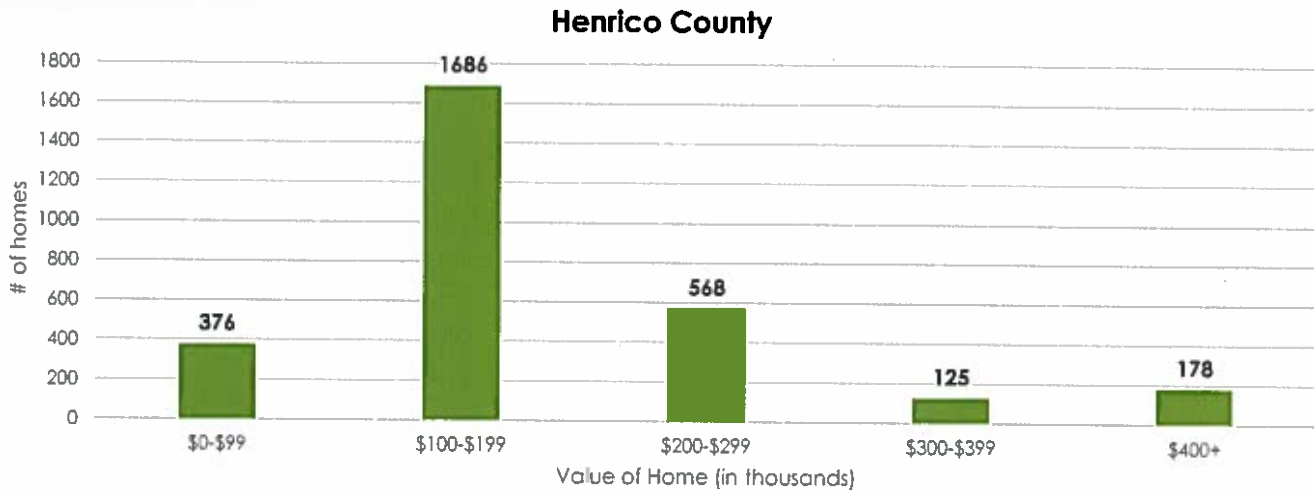
**Table 4 & 5**



The data in Henrico (Table 6) are not nearly as disparate between districts as the City of Richmond, but most senior homeowners (70.3%) nonetheless own homes valued below \$200,000.<sup>24</sup>

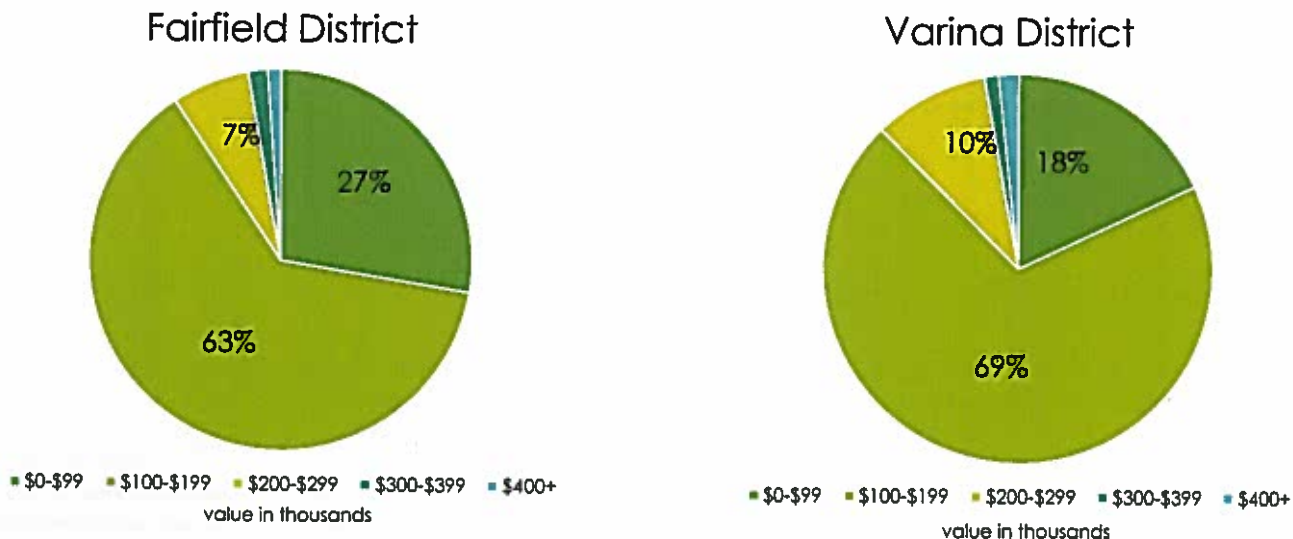
<sup>24</sup>CVR MLS.

**Table 6**



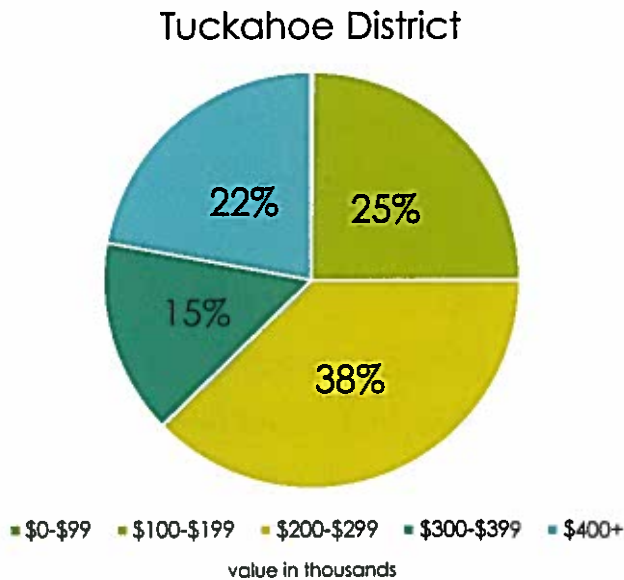
Additionally, in the Fairfield District in particular, there is a significant percentage of senior households who own their homes unencumbered with values under \$200,000. Out of the 862 senior households in Fairfield that meet the criteria of this study (Table 7), 781, or 90.6 percent, of them have home values of \$199,999 or less. The data in the Varina district (Table 8) are similar to those in the Fairfield District, with 87.5 percent of seniors whose home values are less than \$200,000.<sup>25</sup>

**Tables 7 & 8**



On the other hand, the Tuckahoe District (Table 9) has the most senior households valued at \$400,000 or more in Henrico. But the lower valued categories are similar to the highest valued category, indicating a more evenly distributed district.<sup>26</sup>

**Table 9**

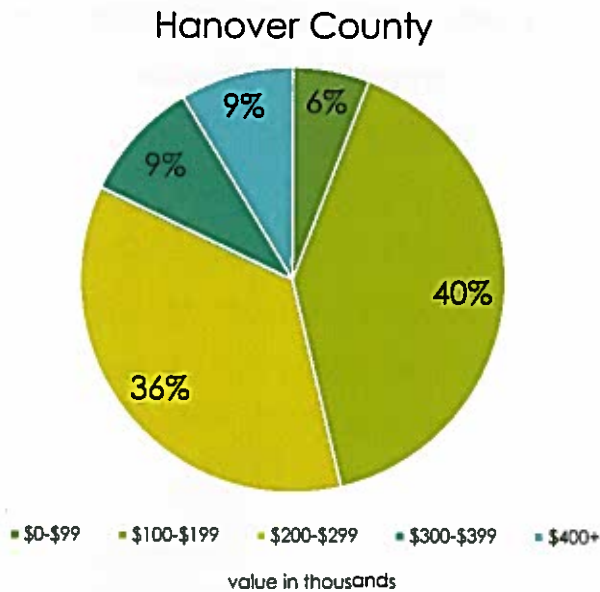


Of the four localities in the region, Hanover (Table 10) by far has the most evenly distributed home values. But Hanover also has the lowest number of seniors who meet the designated search criteria of this study. Only 46.2 percent of senior households have values under \$200,000, which is a significant difference compared to the 70 percent seen in Henrico. Furthermore, only 9 percent of homes are worth \$400,000 or more and 35 percent are worth between \$200,000 and \$299,999.<sup>27</sup>

<sup>26</sup>The data for the remaining districts in Henrico can be found in Appendix A.

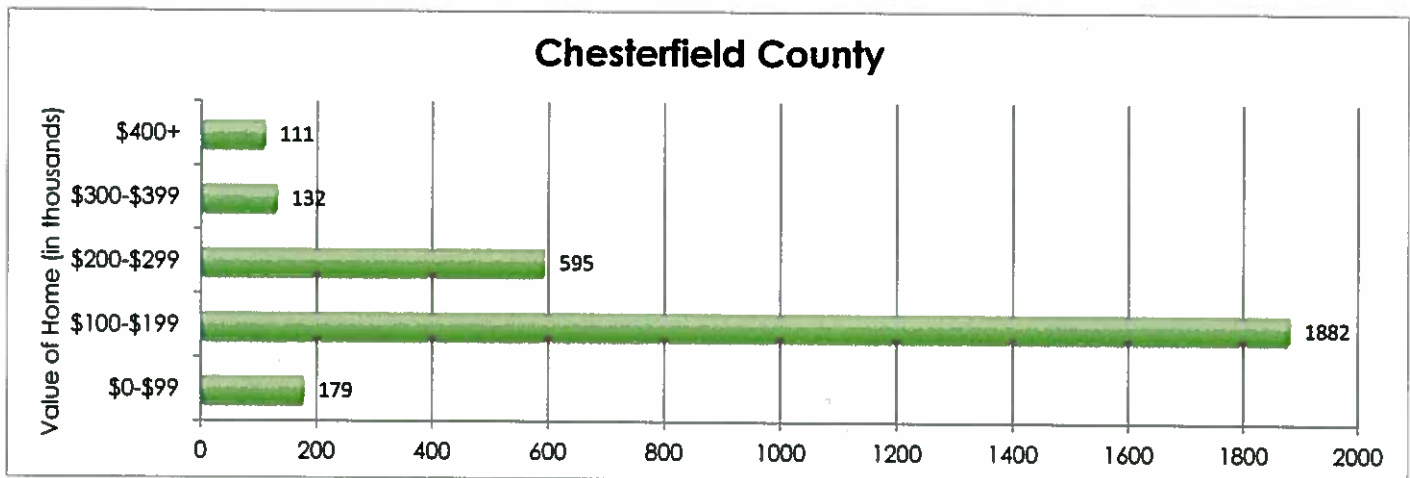
<sup>27</sup>CVR MLS.

**Table 10**



The final locality, Chesterfield (Table 11), represents a return to the disproportionate numbers seen in Henrico and the City of Richmond. Chesterfield has 71.1 percent of unencumbered seniors with home values of less than \$200,000.<sup>29</sup>

**Table 11**

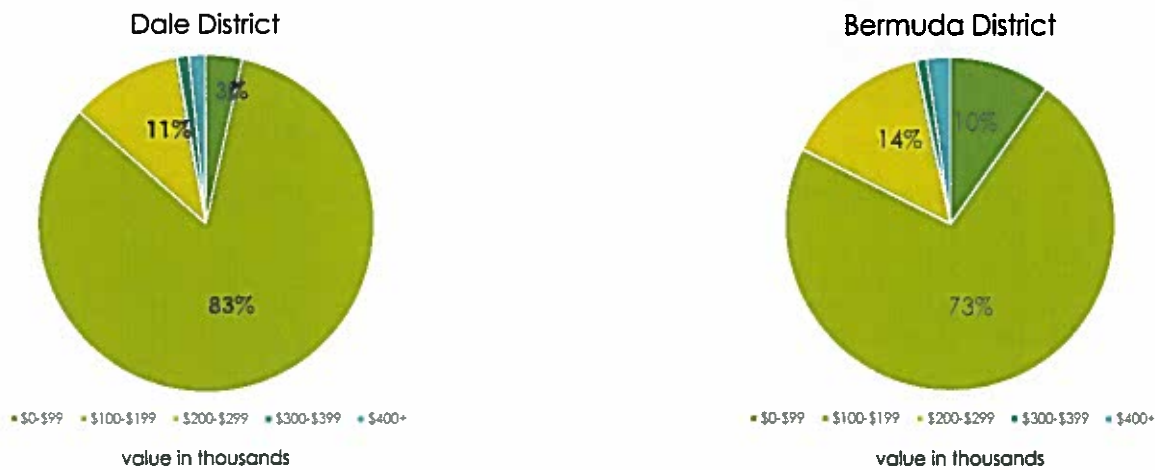


<sup>28</sup>The data for the remaining districts in Hanover can be found in Appendix A.

<sup>29</sup>CVR MLS.

And similar to the city of Richmond, Chesterfield magisterial districts—with the exception of Midlothian—have a majority of housing units valued below \$200,000. The Dale District (Table 12), for example, has 86 percent of unencumbered seniors with values of \$199,999 or less. Bermuda (Table 13) is no different, having 83 percent valued at \$199,999 or less.<sup>30</sup>

**Tables 12 & 13**



Midlothian is the exception in Chesterfield, with only 43 percent of seniors owning homes valued at less than \$200,000.<sup>31</sup> Despite this much lower rate (the next closest district is Matoaca with 73.2 percent) the raw numbers indicate that still a significant number of unencumbered seniors in Midlothian, 300 households, own homes valued below \$200,000.<sup>32</sup> As demonstrated by the Chesterfield data in Table 11 above, well over 2,000 unencumbered senior households are valued at \$199,999 or less. These four localities, with the slight exception of Hanover, have a high percentage of seniors whose home values, and thus resulting equity, may not provide sufficient resources to enable them to transition to other desired housing options, e.g., age-restricted, maintenance free communities. The table below provides a complete snapshot of the data from the region:

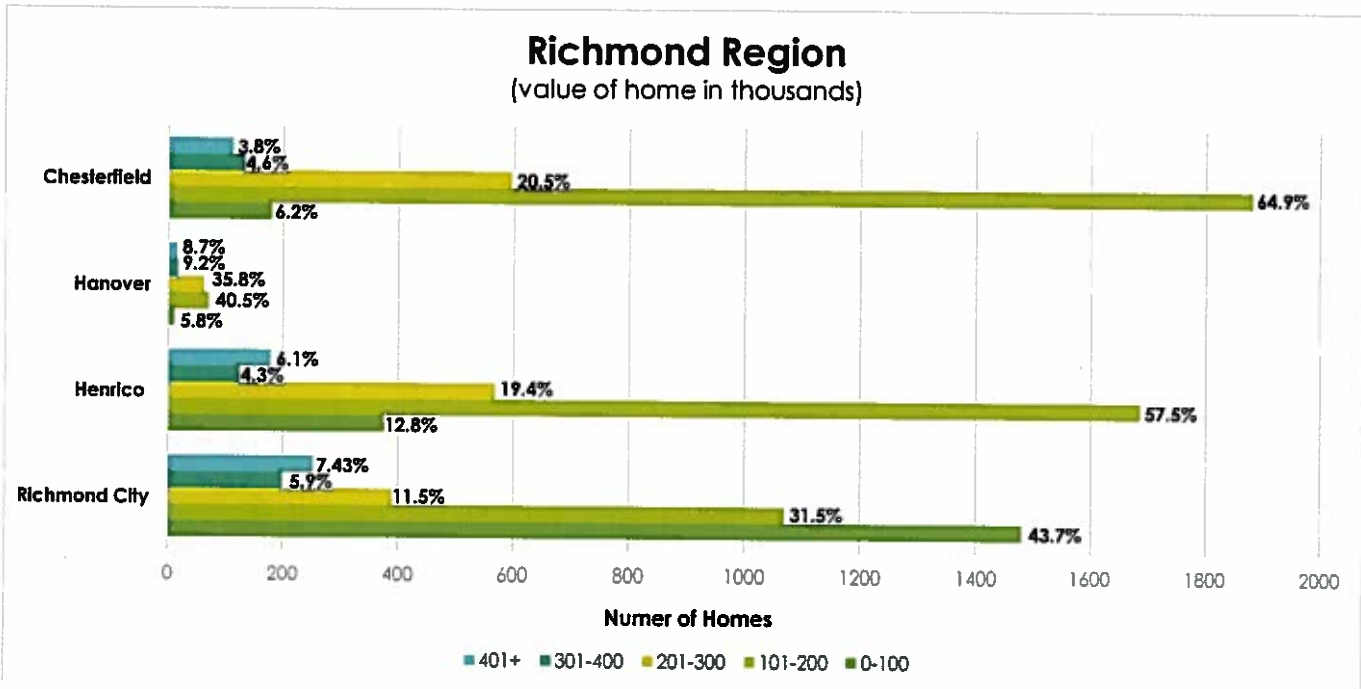
<sup>30</sup>CVR MLS.

<sup>31</sup>The data for the remaining districts in Chesterfield can be found in Appendix A.

<sup>32</sup>CVR MLS.



**Table 14**



To get a sense of where exactly the highest and lowest percentage of senior households valued at less than \$200,000 are located, the following tables provide the districts with the highest and lowest concentration of senior homes valued below \$200,000:<sup>33</sup>

**Table 15**

| District     | Locality | % <\$200,000 |
|--------------|----------|--------------|
| 9th District | Richmond | 99%          |
| 8th District | Richmond | 98%          |
| 6th District | Richmond | 96%          |
| 7th District | Richmond | 92%          |
| Fairfield    | Henrico  | 90%          |

<sup>33</sup>CVR MLS.

**Table 16**

| District            | Locality | % <\$200,000 |
|---------------------|----------|--------------|
| 1st District        | Richmond | 18%          |
| 2nd District        | Richmond | 23%          |
| Tuckahoe District   | Henrico  | 25%          |
| South Anna District | Hanover  | 34%          |
| Beaverdam District  | Hanover  | 36%          |

## Senior Living

### **Age-Restricted Communities**

With 71.8 percent of unencumbered seniors living in homes that are worth \$200,000 or less, it is crucial to take the next step and make sense of the implications these data have for the Richmond region. In order to do so, analysis of the current market for age-restricted communities is essential. First, it would be helpful to distinguish between age-restricted communities and institutional care. Age-restricted communities typically are communities that are safe, single-level, low maintenance, and often gated. The age restriction is usually 55 years and older, though it varies depending on the community.<sup>34</sup> Nationally, these communities accounted for roughly 3 million households headed by an individual aged 55 and over in 2011.<sup>35</sup>

<sup>34</sup>Wardrip, Keith. *Strategies to Meet the Housing Needs of Older Adults*. AARP Public Policy Institute, 2010, *Strategies to Meet the Housing Needs of Older Adults*.

<sup>35</sup>*Housing America's Older Adults*.

Additionally, the residents of age-restricted communities were split evenly between renters and owners, with 1.6 million and 1.4 million, respectively. In these communities, residents live independently. Institutional care refers to facilities such as nursing homes, residential treatment facilities, or any other housing in which residents receive services, personal care, or share regular meals. Institutional care is also commonly referred to as group quarters. While this kind of long-term care is important, only 1.2 million people nationwide stayed in group quarters at any given time in the year 2012, and not all those individuals were over the age of 50. Furthermore, a meager 2 percent of older adults live in group quarters in general, with this share increasing to 8.3 percent for those aged 80 and over.<sup>36</sup>

Given the rather large share of older adults that live in private homes, an examination of available senior housing is needed, especially age-restricted communities. The Richmond region has over twenty of these communities.<sup>37</sup> Out of over thirty houses that are for sale in those communities as of October 2017, the average price is \$347,430.<sup>38</sup> Based off the data from the previous section, only 5 percent of unencumbered seniors have homes with values between \$300-\$399,999, the smallest share of all the categories. In fact, a remarkable 88 percent of seniors in this study have homes that are worth less than \$300,000. This illustrates that there exists a significant gap between senior households' current equity stake and the average price of age-restricted housing. Even if seniors wished to purchase in the future, they would need to use savings and/or take on a mortgage—steps that many seniors, particularly the Silent Generation, are reluctant to take.

<sup>36</sup>Donahue, Kerry. *Projections & Implications for Housing a Growing Population: Older Households 2015-2035*. Joint Center for Housing Studies of Harvard University, 2016.

<sup>37-38</sup>Ness, Bill. "Richmond, VA 55+ Active Adult Retirement Communities." *Richmond Area 55+ Active Adult Retirement Communities*. [www.55places.com/virginia/area/richmond/?page=1](http://www.55places.com/virginia/area/richmond/?page=1)

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Currently, out of the thirty houses for sale, thirteen of them are listed below \$300,000. Of those, the average sale price is \$267,477. Therefore, some senior households—roughly 25 percent—appear to be able to purchase these houses, based on the equity in their current homes. But this still leaves out the majority of unencumbered senior households. This means that thousands of older adults may find it financially challenging to downsize and live in age-friendly housing or communities. As a result, more and more older adults may be living in homes and communities that are not suitable to their changing needs, particularly when they reach the age of 65 and disabilities become more likely.<sup>39</sup>

Financial costs aside, the region lacks a sufficient supply of available homes for older adults. In this study, there are over 9,000 senior households. That number does not consider the burgeoning population of younger baby boomers. Indeed, many seniors will age in place and have the financial stability to do so. But, even if the existing housing stock were more affordable, thousands of seniors would still be without a livable community to move into. The region lacks a sufficient supply of housing options for seniors and this gap will grow given the growth in senior households, unless the home building industry responds aggressively to this demand. But the ability of developers to generate more units, especially affordable units, is often stymied by land use and zoning policies.<sup>39</sup>

## **Policy Options**

There are numerous policy options that exist to combat this pressing issue, and future policy ideas must be as diverse as this aging generation. Of course, at the federal level, the Department of Housing and Community Development (HUD) could expand funding for Section 202 properties, which concentrate on assisting low-income, older adults. But for the purposes of this study, it is more useful to discuss policies that are administered at the state and local level as well as ideas that specifically focus on elderly homeowners.

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<sup>39</sup>Currently, 25% of the region's land is committed to residential use. Source: Compiled by the Richmond Regional Planning District Commission 2015.

### **Accessibility Strategies**

To assist older adults with their evolving physical needs, the Richmond region has already implemented some programs that address accessibility. For example, the Housing Rehabilitation Program in Henrico "enhances livability of homes" through adaptability improvements and system upgrades.<sup>40</sup> The program helps low-income seniors who are at least 62 years of age and offers a forgivable loan at a 0 percent interest rate. The loan amount is forgiven by a percentage each year that the owner occupies and maintains the unit. Oversight of the program is executed by the non-profit agency project: HOMES.<sup>41</sup> Additionally, Chesterfield has shown an understanding of the older housing stock that exists throughout the region. More than half of Chesterfield's "single family housing stock is twenty-five years or older."<sup>42</sup> In fact, 34 percent of single-family homes in Chesterfield were constructed before 1971.<sup>43</sup> As a result, the county created a Home Modernization Guide that is designed to enhance aging residential areas. The guide includes aging in place recommendations, the need to sustain aging communities, and design styles that can modernize homes.

Moreover, it is critical to have new housing that is equipped with accessible features that meet the changing needs of older adults. Given the fact that it is less expensive to include these features during initial construction rather than modifying afterwards<sup>44</sup>, strategies could be pursued to incentivize and encourage accessibility features in new construction. The Richmond region could incentivize builders to incorporate accessibility features in the construction of new housing.

<sup>40-41</sup>Homeowner and Homebuyer Assistance Programs. Homeowner and Homebuyer Assistance Programs, Department of Community Revitalization, 2014, [henrico.us/assets/HomeownerAssistProg.pdf](http://henrico.us/assets/HomeownerAssistProg.pdf).

<sup>42</sup>County of Chesterfield, Department of Community Enhancement. "Home Modernization Guide." *Home Modernization Guide*.

<sup>43</sup>*Home Modernization Guide*.

<sup>44</sup>Maisel, Jordana L., Eleanor Smith, and Edward Steinfield. *Increasing Home Access: Designing for Visitability*. Washington, DC: AARP Public Policy Institute, 2008.

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One program that is already in place in Virginia to address accessibility in new construction is the Virginia Livable Homes Tax Credit (LHTC). LHTC is a program “designed to improve accessibility and universal visitability in Virginia's residential units by providing state tax credits for the purchase of new units or the retrofitting of existing housing units.”<sup>45</sup> Licensed contractors or individuals who file Virginia income tax returns, have incurred costs for construction of new units with accessibility features, or purchased new units with accessibility features may be eligible for the program. Expenses must be claimed by only one taxpayer, new units must include three or more accessibility/visitability features, and existing units that are being retrofitted must have at least one accessibility/visitability feature. Applicants for the program must also be the individual who has incurred the cost of including accessibility/visitability features.<sup>46</sup>

The tax credits for existing units are available for up to 50 percent for the cost of retrofitting, and cannot exceed \$5,000. As for new units, tax credits up to \$5,000 for the purchase of a new, accessible residence are available.<sup>47</sup> LHTC can be an extremely useful program moving forward for both senior homeowners and the building community. It is a program that simultaneously addresses properly aging in place and the construction of accessible senior housing. Furthermore, LHTC will inevitably become a more utilized program. By 2025, Virginians aged 85 and older will grow five times faster than the state's total population growth, thus increasing the number of seniors with disabilities.<sup>48</sup> LHTC is a program administered by the Virginia Department of Housing and Community Development (DHCD)<sup>49</sup> and applications are due each year by February 28th.<sup>50</sup>

<sup>45</sup>*Livable Homes Tax Credit*. Livable Homes Tax Credit, [www.dhcd.virginia.gov/images/Housing/LHTC/LHTC-Brochure3.pdf](http://www.dhcd.virginia.gov/images/Housing/LHTC/LHTC-Brochure3.pdf).

<sup>46-48</sup>*Livable Homes Tax Credit*.

<sup>49</sup>For more information about the program, applications, and accessibility standards, visit [www.dhcd.virginia.gov/LHTC](http://www.dhcd.virginia.gov/LHTC).

<sup>50</sup>For further resources on home modifications and accessibility design, visit the following sources: [www.eldercare.gov/ELDERCARE.NET/Public/Resources/Factsheets/Home\\_Modifications.aspx](http://www.eldercare.gov/ELDERCARE.NET/Public/Resources/Factsheets/Home_Modifications.aspx), the national resource center on affordable housing and home modification at [www.homemods.org](http://www.homemods.org), and AARP's senior resource center for home modifications for seniors at [www.aarp.org/home-garden/home-improvement/](http://www.aarp.org/home-garden/home-improvement/).

**Services & Transit Strategies**

Additionally, policy discussions must focus on connecting existing homeowners with social services and expanding transportation options for senior citizens, given the large number of seniors who are choosing or are forced by financial circumstances to age in place and live independently. The concerns regarding aging in place are often heightened in rural areas. These communities have less access to services that facilitate independent living and as a result, many seniors stay in their homes long after they can no longer mentally, financially, or physically handle them. Unfortunately, it typically requires a dramatic incident such as illness, the loss of a spouse, or an accident to prompt a housing relocation. These conditions simply do not satisfy the concept of properly aging in place. In order to do so, seniors must have access to transportation, assistance, and home modifications that increase their home accessibility.<sup>51</sup>

Vastly different challenges confront rural areas than urban and suburban communities. The issue of connectivity between housing, transportation, and services is exacerbated by the isolation that often characterizes rural living. Beyond connectivity, rural seniors face an uphill battle with housing options in general. More than 25 percent of all seniors live in rural and small-town areas nationwide.<sup>52</sup> In most rural communities, the only housing options for seniors are the homes that they currently own, which typically require maintenance that is far too difficult for seniors to remedy by themselves. To address this issue for rural, senior homeowners, reverse mortgages have become a viable option.

<sup>51</sup>Salomon, E. 2010a. Housing Policy Solutions to Support Aging in Place Fact Sheet. Washington DC: AARP Public Policy Institute.

<sup>52</sup>Oberdorfer, Eric, and Keith Wiley. "Housing an Aging Rural America: Rural Seniors and Their Homes." *Housing Assistance Council*, Atlantic Philanthropies, Oct. 2014.

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Reverse mortgages allow homeowners to receive monthly payments from lenders instead of paying a mortgage to the lender. This is accomplished by “withdrawing equity from the home, in the form of cash, while still retaining homeownership.”<sup>53</sup> There is only one type of reverse mortgage, the Home Equity and Conversion Mortgage (HECM), that is insured by the Federal Housing Administration (FHA) and regulated by HUD. To be eligible for a HECM loan, borrowers must be at least 62 years of age, not be in default on any government debt, and finish a housing counseling program prior to the loan being closed.<sup>54</sup> Funds from reverse mortgages are received in the form of monthly advances, lump sums, a line of credit, or a combination of the three. Additionally, income level and credit worthiness are not taken into consideration when the loan amount is being determined by the lender. The only determining factors on the amount that can be borrowed are the borrower’s age, the interest rate charged by the lender, and the equity in the home.<sup>55</sup>

As a precaution, there are legitimate drawbacks to reverse mortgages. For example, HECM loans require an upfront mortgage premium to be paid that is equal to 2 percent of the home’s appraised value. There is also a “saver”<sup>56</sup> option that permits a premium payment of only .01 percent of the home’s appraised value, a program implemented in 2010. Furthermore, seniors with reverse mortgages who wish to move into a new home are required to pay the remainder of their mortgage debt in full before moving. This can become a major impediment for seniors who are living on fixed-incomes and often results in seniors becoming trapped in their current homes. Lastly, reverse mortgage borrowers have fallen victim to misleading advertising over the past decade. These promotions would specifically target seniors with “too good to be true”<sup>57</sup> offers without mentioning the risks associated to reverse mortgages. Consequently, it is imperative that seniors are knowledgeable about the program prior to utilizing it. HUD does provide counseling sessions to assist senior borrowers, but the quality of the lessons varies greatly.<sup>58</sup>

<sup>53-57</sup>*Housing an Aging Rural America.*

<sup>58</sup>**For additional resources on reverse mortgages, the HUD list of approved lenders can be located at: [www.hud.gov/ll/code/llscrit.cfm](http://www.hud.gov/ll/code/llscrit.cfm); AARP also offers information on reverse mortgages at: [www.aarp.org/money/credit-loans-debt/reverse\\_mortgages/](http://www.aarp.org/money/credit-loans-debt/reverse_mortgages/); the Home Loan Learning Center can walk you through the steps to determine if a reverse mortgage is right for you at: [www.homeloanlearningcenter.com/reversemortgagelendingresourcecenter.htm](http://www.homeloanlearningcenter.com/reversemortgagelendingresourcecenter.htm).**

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As for transportation, having a system with multi modal options allows older adults who live in more urban areas to remain independent and active. But these options remain unavailable for many seniors. In a poll conducted by AARP Knowledge Management, 44 percent of older adults indicated that they lacked reliable, easy access to public transit.<sup>59</sup> Some strategies to help address this issue include increased funding for transit agencies to improve reliability, expand coverage areas, and enhance service accessibility.<sup>60</sup> Additionally, the Richmond region could promote Supplemental Transportation Programs (STP's).<sup>61</sup> STP's are community based and present an alternative to traditional transportation that may not be accessible or feasible for older adults. The appeal of STP's is that they are more flexible and responsive to individual needs. Typically, community-based organizations sponsor STP's for certain localities.<sup>62</sup> In Virginia there are STP's in Hampton Roads and Northern Virginia.<sup>63</sup> The demand for services in the Hampton Roads area has become so strong that taxis are now being used for paratransit services.<sup>64</sup> Elsewhere, West Austin Caregivers, a non-profit that volunteers for senior citizens, started a program called Drive a Senior, which circumvents inadequate public transit via volunteer drivers and encourages aging in place. A similar program has been implemented in Portland, Oregon, called Ride Connection.<sup>65</sup> These programs provide necessary services to older adults who are inadequately served by the current public transit system.<sup>66</sup>

<sup>59</sup>Skufca, Laura. *Is the Cost of Gas Leading Americans to Use Alternative Transportation?* Washington, DC: AARP Knowledge Management, August 2008.

<sup>60</sup>AARP Office of Policy Integration. *The Policy Book: AARP Public Policies 2009-2010*.

<sup>61</sup>**In Appendix B, there are pictures of the two out of state STP's discussed in this section, Ride Connection and Drive a Senior.**

<sup>62</sup>The Beverly Foundation. *Supplemental Transportation Programs for Seniors*. AAA Foundation for Traffic Safety, 2002. *Supplemental Transportation Programs for Seniors*.

<sup>63</sup>**Appendix B also contains pictures of STP's in Hampton Roads and Northern Virginia.**

<sup>64</sup>Transit, Hampton Roads. "Hampton Roads Transit." *Hampton Roads Transit RSS*, Oct. 2017, [gohrt.com/services/paratransit/](http://gohrt.com/services/paratransit/).

<sup>65</sup>*Hampton Roads Transit RSS*.

<sup>66</sup>Kershner, Helen, and Joan Harris. "Better Options for Older Adults."

Within the Richmond region, Senior Connections is an agency that helps seniors maintain a solid quality of life and facilitate independence as they age. One of the many services of Senior Connections is specialized transportation for medical appointments, social services, and other critical needs. Though not solely an organization for STP's, Senior Connections has a solid framework for the region to rally behind to improve transportation options for seniors. Additionally, the Greater Richmond Transit Company (GRTC) has a fleet of 80 vehicles that provides curb-to-curb service. This specialized transportation offers a program that allows seniors aged 80 years or older to receive a reduced fare cost, and permits program participants to utilize the local, fixed-route bus for free.<sup>67</sup>

### ***Housing, Development & Demand Strategies***

Zoning policy revisions for older adults such as high-density rental and owner-occupied housing or accessory dwelling units could be implemented to increase the variety of housing options. Accessory dwelling units are more affordable, smaller apartments that are constructed on the same parcel as single-family homes. The units can either be attached or detached from the primary dwelling unit. Permitting the construction of accessory dwelling units (ADUs) engenders a host of benefits, including an increase in a community's housing supply, providing homeowners with an additional source of income, and is an alternative to major zoning changes that can significantly impact neighborhoods.<sup>68</sup> As it pertains to seniors, ADUs facilitate the ability to properly age in place or downsize by being located on the same lot as family members or caregivers. Furthermore, ADUs cost much less to build than a new single-family home that would be constructed on a separate lot<sup>69</sup>, hence ADUs are inherently an affordable housing option.

<sup>67</sup>Information of GRTC's program of seniors can be found at: <http://ridegrtc.com/services/specialized-transportation/care>.

<sup>68-69</sup>United States, Congress, Office of Policy Development and Research, and Sage Computing, Inc. "HUD User." *HUD User*, June 2008.

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Consequently, local governments could adopt ADU ordinances that are specifically enacted to house senior citizens. In Virginia, the City of Fairfax permits the construction and residential use of ADUs as long one of the units (principal or accessory) are owner-occupied by someone 55 years or older.<sup>70</sup> Fairfax ADUs must be attached to the primary dwelling unit, cannot contain more than two bedrooms, and must be in subordinate size to the primary structure (cannot exceed 35 percent floor area of primary unit).<sup>71</sup> The property owner must also allow a city inspector to examine the ADU prior to its official use.<sup>72</sup>

Actions could be taken at the state level as well, as evidenced by Rhode Island. Rhode Island implemented a law in 2017 that facilitates the process of aging in place. Under the law, single family homeowners have the right to build an ADU for a family member who is at least 62 years old without obtaining a permit from the city or town in which the lot is located.<sup>73</sup> Originally the law was restricted to individuals with disabilities, but after elected officials saw the projected shortage of housing for seniors, legislation was filed to make ADUs an easier method of providing affordable housing.<sup>74</sup>

<sup>70</sup>United States, Congress, Community Development and Planning-Zoning Division, and City of Fairfax. "Residential Accessory Uses and Occupancy City Code 110-6.20." *Residential Accessory Uses and Occupancy City Code 110-6.20*, City of Fairfax.

<sup>71</sup>A simpler, more brief description of the zoning ordinance can be found at: [www.fairfaxva.gov/government/code-administration/common-violations](http://www.fairfaxva.gov/government/code-administration/common-violations).

<sup>72</sup>The full zoning ordinance for the City of Fairfax can be found at: <http://www.fairfaxva.gov/home/showdocument?id=7891>. Accessory uses/standards can be found under Chapter 110, Article 3.5.

<sup>73</sup>"Accessory Dwelling Units for Senior Citizens." Rhode Island Association of REALTORS & State-Wide MLS. [kwaor.org/pdfs/ADU\\_FAQS.pdf](http://kwaor.org/pdfs/ADU_FAQS.pdf).

<sup>74</sup>The law can be read here: <http://webserver.rilin.state.ri.us/Statutes/TITLE45/45-24/45-24-37-1.HTM>.

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ADUs are an increasingly intriguing option for senior homeowners, particularly those with a penchant for building and construction. Many ADUs are constructed by the property owner for their future occupancy because it allows for personal design of the structure, can be completed while working other jobs, and is less of a financial burden. Once the ADU is complete, owners can choose to rent out their primary dwelling unit, create a space for an aging family member, or move into the unit themselves. Local governments could create financial incentives to generate the construction of more ADUs by waiving development fees. Portland, Oregon, has implemented this incentive to increase its affordable housing stock and to defray the rising costs of housing throughout its region. Permitting fees for ADUs in the Portland region are roughly \$5,000 currently, which would result in significant savings for those who take advantage of the city's fee waivers.<sup>75</sup>

Furthermore, similar to the Housing Rehabilitation Program in Henrico, loan programs could be utilized to generate the production of more ADUs and ensure their affordability. Barnstable, Massachusetts, a town just south of Boston, created an ADU loan program three years ago due to rising housing costs.<sup>76</sup> To assist homeowners with ADU additions, the town offers zero-interest, deferred payment loans up to \$20,000. Loans are to be repaid if the new unit is ever removed, the property is sold, or the homeowner no longer rents out the ADU.<sup>77</sup>

Additionally, Barnstable has an ADU program that is geared towards homeowners who wish to only rent their ADUs to others. The town calls the program the "accessible affordable apartment."<sup>78</sup> Property owners with existing ADUs were given permits in exchange for building inspectors ensuring that the unit complies with fair housing requirements. The most important caveat, however, is the affordable requirement. Barnstable places a cap on tenant earnings and the rent that can be charged, an amount that is 80 percent of the area median income. The housing coordinator in the town's planning department contends that the program is "designed for low-and moderate-income households" to address the "disconnect between incomes and housing costs."<sup>79</sup>

<sup>75-79</sup>Clark, Brian E., and Joseph R. Molinaro. "Accessory Dwelling Units: The Granny Flat Is Filling a Need Across the Country." *On Common Ground*, Dec. 2018, pp. 14-19. [www.nar.realtor/publications/on-common-ground](http://www.nar.realtor/publications/on-common-ground).

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Despite the success of ADU programs in towns like Barnstable, many development firms simply do not have ADUs as a primary focus. For some localities, this has meant a smaller number of ADUs that are issued permits annually. Santa Cruz County in California has only been able to issue between 10 and 15 ADU permits annually, a number the county's planner would like to see increase to 40.<sup>80</sup> Due to unpredictable ADU plans, construction costs remain expensive and the county's building permit process has been inconsistent. But there are development firms that are beginning to focus on the growth of ADUs and seek to assist clients in navigating the logistics of constructing ADUs, especially the projected costs.<sup>81</sup>

All in all, local governments that seek to use ADUs as an affordable housing option in the future should make every effort to avoid the common mistakes of other programs and ordinances. Understaffed planning and development departments have greatly slowed the permitting process for many localities, which makes typical ADU projects take a year to complete.<sup>82</sup> Planning departments need to have an efficient permit process, a comprehensive method to reviewing ADU plans, and a flexible fee structure to maximize ADU production with minimal costs.<sup>81</sup>

Additionally, there are newer, less traditional housing options such as cohousing.<sup>83</sup> Cohousing<sup>84</sup> has become increasingly popular for older adults who seek communal settings while living outside of institutional facilities.<sup>85</sup>

<sup>80-82</sup>On Common Ground.

<sup>83</sup>Appendix C demonstrates multiple examples of cohousing communities.

<sup>84</sup>For more information regarding cohousing, the following sources may be helpful: <http://www.cohousing.org/>, <http://www.cohousingco.com/>, <http://www.pocket-neighborhoods.net/>, and <http://www.lc.org/>.

<sup>85</sup>Housing America's Older Adults.

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Compared to peer regions<sup>86</sup> around the country (Austin, Louisville, Nashville, and Raleigh), the Richmond region issues the lowest number of building permits by far (permits for all residential units). From 2010-2014, the number of building permits increased by 20 percent in the Richmond region, from 3,456 to 4,312.<sup>87</sup> A 20 percent increase may seem substantial, but it pales in comparison to peer regions. Raleigh saw the number of its building permits increase 55 percent during that same time, spiking from 5,213 to 11,647.<sup>88</sup> Louisville increased its building permits by 37 percent and Nashville by 66 percent, a jump from 5,092 to 14,944.<sup>89</sup> These numbers are intriguing because both Raleigh and Louisville have population totals almost identical to the Richmond region; and Richmond has experienced a larger population growth than both of those regions since the beginning of the century.<sup>90</sup> But the Richmond region has lagged in expanding its housing supply and embracing denser development patterns, thus making it far more difficult to adequately house growing population cohorts, especially seniors.

Another strategy local governments could implement is a density bonus. A density bonus permits the increase of dwelling units per acre. Typical density bonus programs allow for 10-20 percent more density in exchange for the provision of affordable (below market rate) units. Montgomery County, Maryland, has a density bonus program that has generated a significant increase in affordable units. The county requires that 12.5 percent of all residential units be affordable. That set aside increases to 15 percent for developers wishing to capitalize on the county's density bonus. The program permits developers to build up to 20 percent more floor area (which measures how intensively a site is developed) than would be allowed under the local zoning ordinances.<sup>91</sup> In terms of costs, such density measures are encouraged, because studies have shown that more densely developed land actually reduces local government spending.<sup>92</sup>

<sup>86</sup>Peer regions were chosen based on comparable size and composition. These same regions have been used in several studies by PHA, Virginia Commonwealth University, and the Capital Region Collaborative.

<sup>87</sup>U.S Census Building Permit Survey. (2010). Annual Permits by Metropolitan Area.

<sup>88-89</sup>U.S. Census Building Permit Survey. (2014). Annual Permits by Metropolitan Area.

<sup>90</sup>U.S. Census, American Community Survey, 2014 1-Year Estimates. Comparative Demographic Estimates.

<sup>91</sup>Center for Housing Policy. Grounded Solutions Network, 2009.

<sup>92</sup>Carruthers, John I., and Gudmunder, F. Ulfarsson. "Does 'Smart Growth' Matter to Public Finance?" *Sage Journals*, vol. 45, no. 9, 1 Aug. 2008, pp. 1791-1823. Urban Studies.

Local governments can offer full or partial fee waivers on permitting fees, planning fees, and proffers, if a developer's project includes a percentage of affordable housing units. Fees could be waived for parking space, water, waste, and construction inspections, all in an effort to incentivize density that is affordable.<sup>93</sup> Additionally, it would be effective to employ long-term restrictions on affordable units to ensure that they remain affordable in perpetuity. For example, local governments could record a 30-year restriction each time an ownership unit is sold to ensure perpetual affordability.<sup>94</sup>

Furthermore, developers could be incentivized with expedited processing. Under this program, projects with affordable units are moved to the front of the line for planning, zoning, and building permit approval processes. This would be enticing to developers because faster processing mitigates risk, reduces financing costs, and enables developers to bring their projects to the market faster. San Diego, California's expedited program has yielded over 300 projects with 2,800 affordable homes in just over 10 years. Projects with at least 10 percent affordable units are eligible and the program offers priority on hearing dockets, shorter staff review times, and access to "specialized"<sup>95</sup> city staff. More importantly, projects that have participated in the program have been processed in half the time of a non-participating project. In addition to an expedited review process, the Richmond region could also consider a reduction in parking requirements—an incentive that can lower construction costs by permitting projects with affordable units to create fewer parking spaces than would be required under the local zoning rules.

<sup>93</sup>Center for Housing Policy. *Best Practices for Inclusionary Zoning Administration*. Grounded Solutions Network, 2009, [inclusionaryhousing.org/designing-a-policy/onsite-development/the-set-aside-requirement/](http://inclusionaryhousing.org/designing-a-policy/onsite-development/the-set-aside-requirement/).

<sup>94</sup>Center for Housing Policy.

<sup>95</sup>Center for Housing Policy. Grounded Solutions Network, 2009

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Lastly, local governments can conduct a feasibility study to evaluate the economic tradeoffs associated with requiring affordable units in a new project. The study seeks to guide policymakers regarding the economic potential of newly implemented programs. Simply, its goal is "to determine how a new...policy would affect market-rate housing development costs and profits."<sup>96</sup> It can serve as reassurance to elected officials that these programs would not deter development, and that they will yield the affordable units needed to benefit the community. Feasibility studies typically introduce the new policy and its scope, analyze the local economy and market conditions, provide an economic analysis of a hypothetical project based off assumptions from the current market, and discuss the findings and subsequent recommendations.<sup>97</sup>

### **Conclusion**

These policy options have been implemented elsewhere, proven to be successful, and should be considered as valuable starting points for addressing this challenge in the Richmond region. But these policies are not a panacea. The impetus of this study was the significant gap that existed between the equity of unencumbered senior households and the sale price of age-restricted housing. Now that the gap has been quantified, the data serve to inform the building community that there is a market—a significant market—to capitalize on, if they will build at an affordable price point. Based off the data in this report, such a price point would be approximately \$175,000. This is a unique opportunity for the building community and for local governments—an opportunity to recognize the value of greater density as well as the utilization of incentives (e.g. fee waivers) and creative land use strategies as means to increase affordable housing options for seniors and our collective quality of life.

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<sup>96-97</sup>Center for Housing Policy. Grounded Solutions Network, 2009



Greater density, fee waivers<sup>98</sup>, and economic studies are key incentives that would allow the Richmond region to establish a stronger rapport with the building community, thus resulting in more affordable units and more options for senior households. The findings of this study show that a market exists for developers and local governments to create a relationship that will support the senior community and its needs.

The research conducted as part of this report has identified opportunities to address these problems and make housing more accessible to senior citizens. Efforts to incentivize builders and increase the accessibility of housing for seniors will make the region's housing more affordable and attractive. If actions are not taken to acknowledge and emphasize this issue, thousands of seniors will possibly be left with few options to properly age in place or live independently. In the short term, the seniors in this study will experience hardships as they struggle with housing costs and related sacrifices. In the long term, the booming senior population will magnify this predicament, if actions are not taken to increase the supply of affordable senior housing. Therefore, we hope local governments and stakeholders will draw on this research to undertake these current and future challenges bravely and pave the way for future senior homeowners.<sup>99</sup>

<sup>98</sup>Austin, Texas has an Innovate S.M.A.R.T Housing Initiative that seeks to create affordable, accessible, transit-oriented housing. A large component of the initiative is a fee waiver system. More can be found on the program at this source: [http://www.austintexas.gov/sites/default/files/files/Web\\_version\\_SMART\\_Guide\\_7-1-08.pdf](http://www.austintexas.gov/sites/default/files/files/Web_version_SMART_Guide_7-1-08.pdf)

<sup>99</sup>Clower, Terry L., et al. *Addressing the Impact of Housing for Virginia's Economy*. Virginia Center for Housing Research, 2017. *Addressing the Impact of Housing for Virginia's Economy*.

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## Appendix A

| Senior Household Values<br>by District | \$0-\$99,999 | \$100,000-<br>\$199,999 | \$200,00-<br>\$299,999 | \$300,000-<br>\$399,999 | \$400,000+ |
|--|--------------|-------------------------|------------------------|-------------------------|------------|
| 1st District                           | 1%           | 17%                     | 23%                    | 21%                     | 38%        |
| 2nd District                           | 10%          | 13%                     | 14%                    | 21%                     | 42%        |
| 3rd District                           | 30%          | 54%                     | 10%                    | 4%                      | 2%         |
| 4th District                           | 4%           | 37%                     | 39%                    | 13%                     | 7%         |
| 5th District                           | 34%          | 42%                     | 17%                    | 4%                      | 3%         |
| 6th District                           | <b>82%</b>   | 14%                     | 0%                     | 1%                      | 3%         |
| 7th District                           | <b>72%</b>   | 20%                     | 2%                     | 3%                      | 3%         |
| 8th District                           | <b>78%</b>   | 20%                     | 1%                     | 1%                      | 0%         |
| 9th District                           | 36%          | <b>63%</b>              | 1%                     | 0%                      | 0%         |
| Tuckahoe District                      | 0%           | 25%                     | 38%                    | 15%                     | 22%        |
| Three Chopt District                   | 1%           | 52%                     | 43%                    | 1%                      | 3%         |
| Fairfield District                     | 27%          | <b>63%</b>              | 7%                     | 2%                      | 1%         |
| Brookland District                     | 1%           | <b>74%</b>              | 19%                    | 2%                      | 4%         |
| Varina District                        | 18%          | <b>69%</b>              | 10%                    | 1%                      | 2%         |
| Bermuda District                       | 10%          | <b>73%</b>              | 14%                    | 1%                      | 2%         |
| Dale District                          | 3%           | <b>83%</b>              | 11%                    | 11%                     | 2%         |
| Midlothian District                    | 3%           | 40%                     | 38%                    | 11%                     | 8%         |
| Clover Hill District                   | 3%           | <b>71%</b>              | 16%                    | 8%                      | 2%         |
| Matoaca District                       | 10%          | <b>64%</b>              | 20%                    | 3%                      | 3%         |
| South Anna District                    | 0%           | 34%                     | 34%                    | 16%                     | 16%        |
| Mechanicsville District                | 3%           | <b>67%</b>              | 20%                    | 0%                      | 10%        |
| Henry District                         | 5%           | 40%                     | 45%                    | 0%                      | 10%        |
| Cold Harbor District                   | 5%           | 40%                     | 25%                    | 30%                     | 0%         |
| Ashland District                       | 0%           | 50%                     | 50%                    | 0%                      | 0%         |
| Ashland Town District                  | 45%          | 22%                     | 22%                    | 0%                      | 11%        |
| Beaverdam District                     | 6%           | 30%                     | 37%                    | 15%                     | 12%        |
| Chickahominy District                  | 4%           | 35%                     | 61%                    | 0%                      | 0%         |

## Appendix B

Two examples of out of state Supplemental Transportation Programs: *Ride Connection in Portland, Oregon and Drive a Senior in Austin, Texas.*



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<sup>100</sup>Corran, Lydia. "Portland Ride Services | Door-to-Door." Ride Connection, [rideconnection.org/](http://rideconnection.org/).

<sup>101</sup>Stuber, Marth. "Austin WEST." Drive a Senior, United Way, Nov. 2017, [driveasenior.org/austin-west/](http://driveasenior.org/austin-west/).

Example of STP's in Hampton Roads.



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103

STP's in Northern Virginia.



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<sup>104</sup>Mattice, Kate. "Home." Northern Virginia Transportation Commission, Oct. 2017, [www.novatransit.org/trip-planner/paratransit/](http://www.novatransit.org/trip-planner/paratransit/).

<sup>105</sup>Northern Virginia Transportation Commission.

## Appendix C

Three examples of cohousing in Seattle, Washington, Boulder, Colorado, and Sebastopol, California.



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<sup>106</sup>Sevy, Monique. "Reestablishing Community Through Cohousing." *Museum of the City*, International Council of Museums' Committee for the Collections and Activities of Museums of Cities, Oct. 2017. [www.museumofthecity.org/project/reestablishing-community-through-cohousing/](http://www.museumofthecity.org/project/reestablishing-community-through-cohousing/).

<sup>107</sup>"Wild Sage, a Cohousing Community in Boulder Colorado." Wild Sage Cohousing, Oct. 2017. [www.wildsagecohousing.org/ourcommunity.htm](http://www.wildsagecohousing.org/ourcommunity.htm).



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<sup>108</sup>Bassman, Lynette. "Fresno Cohousing." Fresno Cohousing Community Living for Children, Parents, and Seniors, 4 Mar. 2016, [www.fresnocohousing.org/](http://www.fresnocohousing.org/).

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