



MAKING ROOM

Housing for a Changing America

Just as the housing needs of individuals change over a lifetime, unprecedented shifts in both demographics and lifestyle have fundamentally transformed our nation's housing requirements.

- Adults living alone now account for nearly 30 percent of American households.
- While only 20 percent of today's households are nuclear families, the housing market largely remains fixated on their needs.
- By 2030, 1 in 5 people in the United States will be age 65 or over — and by 2035, older adults are projected to outnumber children for the first time ever.
- The nation's housing stock doesn't fit the realities of a changing America.

Featuring infographics, ideas, solutions, photographs and floor plans from the National Building Museum exhibition of the same name, *Making Room: Housing for a Changing America* is a rallying cry for a wider menu of housing options.

Visit AARP.org/MakingRoom to download a PDF of this publication or order a free printed edition.



AARP is the nation's largest nonprofit, nonpartisan organization dedicated to empowering people 50 and older to choose how they live as they age. The AARP Livable Communities initiative works nationwide to support the efforts of neighborhoods, towns, cities and rural areas to be livable for people of all ages. AARP.org | AARP.org/Livable



The National Building Museum inspires curiosity about the world we design and build through exhibitions and programming that explore how the built world shapes our lives. Located in Washington, D.C., the Museum believes that understanding the history and impact of architecture, engineering, landscape architecture, construction, and design is important for all ages. NBM.org



The *Making Room: Housing for a Changing America* exhibition at the National Building Museum was made possible through the generous support of AARP Foundation, which works to end senior poverty by helping vulnerable older adults build economic opportunity and social connectedness. AARPFoundation.org

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MAKING ROOM Housing for a Changing America

AARP and the National Building Museum



MAKING ROOM

Housing for a Changing America



"I want to stay in my home, but I just can't take care of it like I used to."

"Renting out part of our home would be a way for us to earn extra income."



MAKING ROOM

Housing for a Changing America





AARP is the nation's largest nonprofit, nonpartisan organization

dedicated to empowering Americans 50 and older to choose how they live as they age. With nearly 38 million members, plus offices in every state, the District of Columbia, Puerto Rico and the U.S. Virgin Islands, AARP strengthens communities and advocates for what matters most to families, with a focus on health security, financial stability and personal fulfillment. The AARP Livable Communities initiative works nationwide to support the efforts of neighborhoods, towns, cities, counties and rural areas to be livable for people of all ages.

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A publication by AARP and the National Building Museum, ***Making Room: Housing for a Changing America*** is adapted from an exhibition of the same name organized by the Museum and the Citizens Housing & Planning Council in partnership with Resource Furniture and Clei.



The *Making Room* exhibition was made possible with generous support from AARP Foundation, which works to end senior poverty by helping vulnerable older adults build economic opportunity and social connectedness.



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A complete list of exhibition sponsors appears on page 81.

MAKING ROOM: HOUSING FOR A CHANGING AMERICA (THE PUBLICATION)

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A NOTE TO READERS: Unless indicated, data is current to 2017, when most of the writing and research was completed for the *Making Room* exhibition at the National Building Museum, which is the source for much of the text in this publication.



The National Building Museum inspires curiosity about the world we design and build. The Museum believes that understanding the history and impact of architecture, engineering, landscape architecture, construction, and design is

important for all ages. Through exhibitions and educational programs, the National Building Museum explores how the built world has the power to shape our lives, communities, and futures.

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The Great Hall of the National Building Museum is a majestic and popular public venue.

Photo by Kevin Allen

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The exhibition *Making Room: Housing for a Changing America* opened at the National Building Museum in Washington, D.C., in November 2017.

Like the exhibition, this publication introduces readers — be they residential builders or designers, community leaders or the general public — to a future that can feature a menu of housing options that better serve people of all ages and the needs of a changing America.

Download a PDF of *Making Room* or order a free copy by visiting AARP.org/MakingRoom.

Photo by Yassine El Mansouri

Introduction

Making Room to Rethink Housing

AARP staff and volunteers are working in towns, cities and counties nationwide to help local leaders make their communities more livable for people of all ages. Among the keys to livability is housing that's both suitable for and adaptable to the diverse and ever-changing needs of American households and individuals.

By 2030, 1 in 5 people in the United States will be age 65 or over. And by 2035, older adults are projected to outnumber children for the first time ever.

America's current housing stock doesn't fit a rapidly aging population. In 2017, more than 19 million older adults were living in housing that didn't provide them with the best opportunity to live independently, and only about one percent of the nation's present housing is equipped to meet their needs.

The healthiest and most vibrant communities are livable for people of *all* ages.

This publication, *Making Room: Housing for a Changing America*, introduces a potential future in which people of all ages, life stages, abilities and incomes can select from a wider menu of housing options.

Realizing that the *Making Room* exhibition at the National Building Museum was temporary and would not be taken on the road, AARP partnered with the museum to produce this free bookazine. Please encourage others to visit AARP.org/MakingRoom so the information, ideas, examples and solutions collected here can be seen, shared and enjoyed by people of all ages, nationwide.

Nancy LeaMond
Executive Vice President
Chief Advocacy and Engagement Officer
AARP

The National Building Museum celebrates and explores all facets of the built environment. Since it opened in 1985, housing-related exhibitions and educational programs have emerged as touchstone offerings. Our homes are often the first meaningful interaction we have with the built world, and they continue to form the building blocks of our identity. On a larger scale, housing is an economic and societal linchpin.

Organized with the Citizens Housing & Planning Council (CHPC), the *Making Room: Housing for a Changing America* exhibition focused on a key element of the housing equation that, we believe, has been misunderstood and undervalued, if not explicitly ignored — today's living arrangements. CHPC has been focused on parsing household demographics for a decade. In fact, the exhibition's premise was derived from its *Making Room* research initiative.

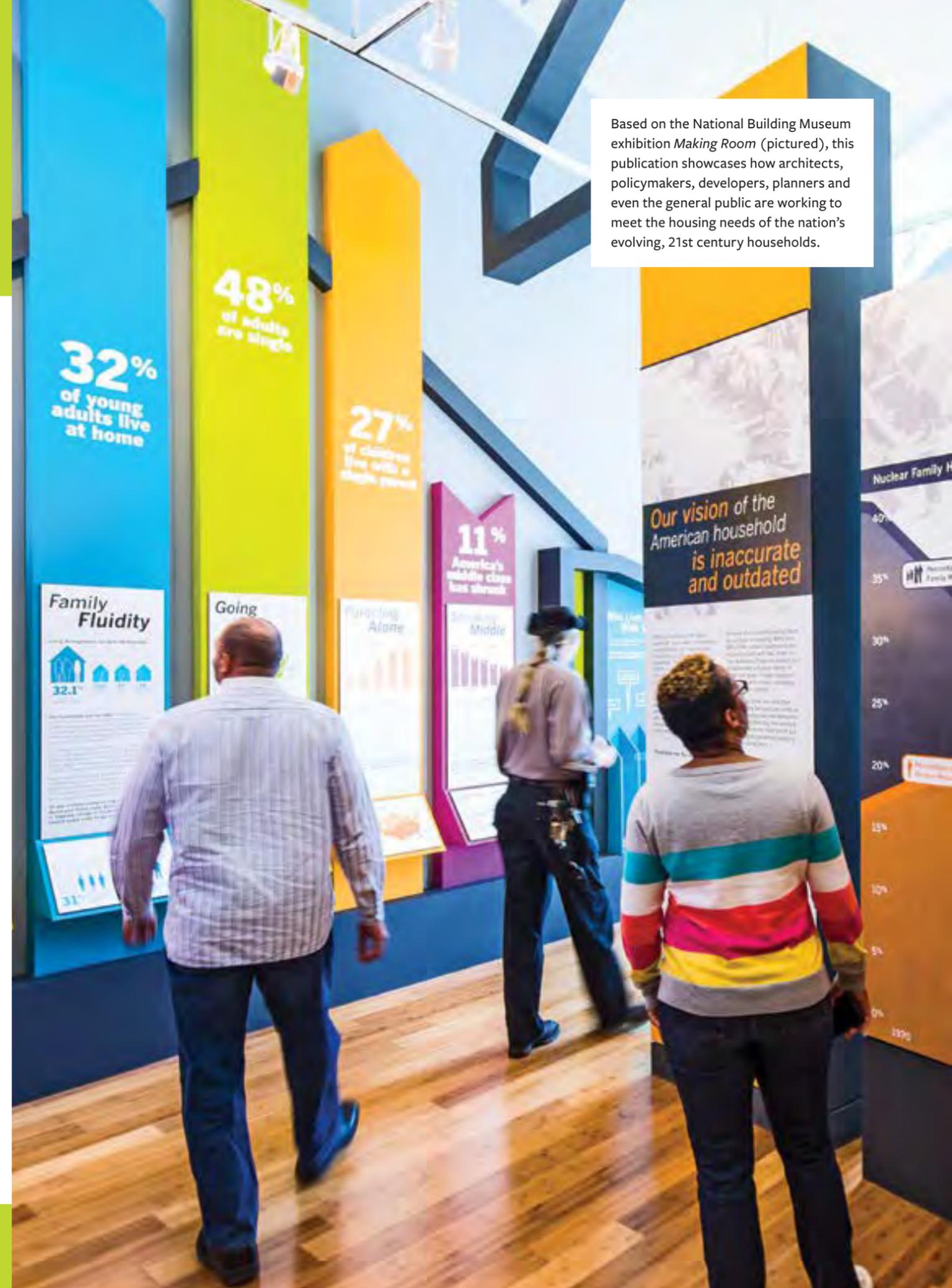
As it turns out, unprecedented shifts in both demographics and lifestyle have fundamentally transformed who we are and how we are living. While only 20 percent of American households are nuclear families, for example, the housing market largely remains fixated on their needs. *Making Room* is a rallying cry for a wider menu of housing options, and the exhibition showcased how design can be an integral tool when it comes to meeting these different needs.

Sincere thanks to our lead exhibition sponsor, AARP Foundation, as well as to Andersen, Hufcor, the National Association of Realtors and our exhibition partners Resource Furniture and Clei. I also extend our gratitude to AARP and the AARP Livable Communities initiative for collaborating on this publication to prolong the life and extend the reach of the exhibition.

Chase W. Rynd, Hon. ASLA
Executive Director
National Building Museum

Photo by Yassine El Mansouri

Based on the National Building Museum exhibition *Making Room* (pictured), this publication showcases how architects, policymakers, developers, planners and even the general public are working to meet the housing needs of the nation's evolving, 21st century households.



Part One

Housing a Changing America

What does a home need to accommodate a young adult or a growing family and still be comfortable years later, when the nest is empty or the residents are older?

In the decades following World War II, the typical U.S. household consisted of a married couple with children. The suburbanization of the nation was driven by this demographic, fueled by prosperity, the automobile and the dream of home ownership.

Fast-forward to the 2010s, when adults living alone account for nearly 30 percent of U.S. households — and that's a growing phenomenon across all ages and incomes.

The housing supply, no matter the locale, has been slow to meet the demands of this burgeoning market or respond to the needs of increasingly varied living arrangements.

Deeply rooted zoning regulations that have long favored the standard single-family home make it difficult for alternatives to materialize. The result is a mismatch between the diversity of the nation's households and the homogeneity of its housing.

However, thanks to a groundswell of housing entrepreneurs who are making room for creative options, new design solutions are beginning to emerge. *Making Room* explores these groundbreaking developments — offered at all levels of the market — from micro-units, tiny houses and accessory apartments to cohousing, co-living and beyond.

All of the highlighted projects, including The Open House, the concept home featured in the exhibition, push past typical typologies and layouts. The home's flexible, 1,000-square-foot, floor plan features a hyper-efficient layout, movable walls and multifunctional furniture, allowing the space to adapt and meet the changing needs of today's households. At press time, The Open House has only been built in the National Building Museum. Learn more in Part Three of this publication.

Americans are changing — and so are their housing needs. Unprecedented shifts in demographics are redefining who we are and how we live. If we simply ask ourselves different questions about how we want to live, we might discover better answers.

The post-World War II suburbanization of the United States was driven by the housing needs of nuclear families, a group defined as two parents and their minor children. In 1950, these families (including the Leveys, shown here, of Levittown, Long Island, a New York City suburb) represented 43 percent of households. Since then, unprecedented shifts in demographics and lifestyle have redefined who we are — and how we live. Today, nuclear families account for 20 percent of U.S. households.



Photo by Bernard Hoffman, LIFE magazine, May 22, 1950, Getty Images

The Popular Vision of the American Household Is Inaccurate and Outdated

In the minds of many, the “typical American household” is a nuclear family consisting of a mother, a father and two children (give or take). Reality significantly differs:

- Nuclear families account for just 20 percent of today’s households.
- The largest demographic, at 28 percent, is single adults who live alone. (They account for more than nuclear and single-parent families combined.)
- As of the mid-2010s, almost half of America’s households were either adults living alone or adults sharing a home with other adults, such as roommates or relatives.

Not only does the popular image of the American household need updating, but so do our collective assumptions about the type of housing we need. A review of the nation’s overall housing stock by unit type is revealing.

- More than 80 percent of the nation’s apartments and houses are built with two, three or four bedrooms.
- These residences are designed with a nuclear family in mind: one larger “master bedroom” for parents and smaller, secondary bedrooms for children.
- Additionally, there are more than twice as many two-bedroom units as there are studios and one-bedrooms combined.

U.S. Housing Stock by Number of Bedrooms



Historically, the smallest units have received short shrift, but today’s largest household category consists of singles living alone. That’s a significant mismatch.
The Bottom Line: Our current housing stock isn’t nearly as diverse as we are.

America’s Households by the Numbers

28%
Single people living alone



25%
Couples (no children)



20%
Adults sharing with other adults



20%
Nuclear Families (two parents, children 21 or under)



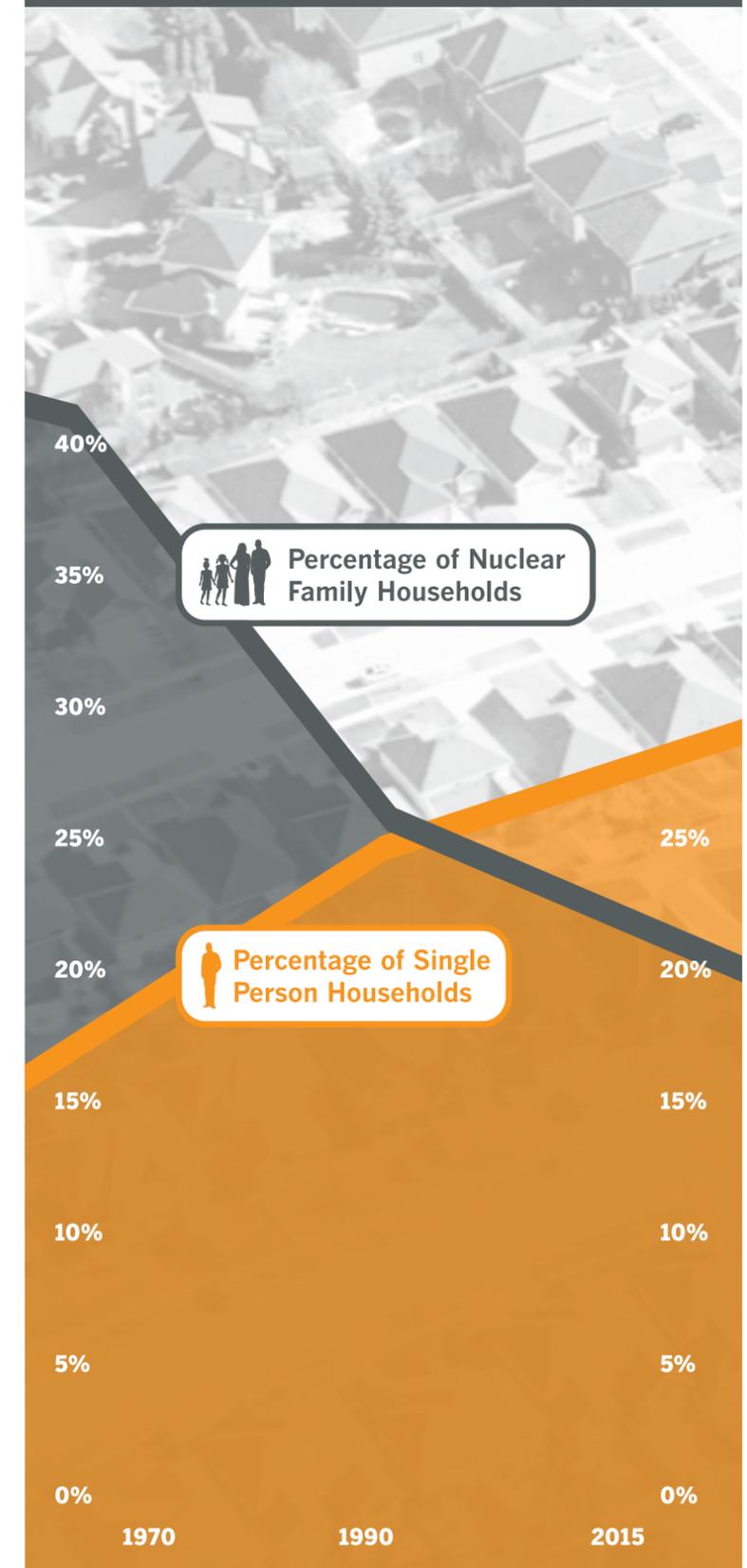
7%
Single parent families (one parent, children 21 or under)



Source: CHPC Making Room Household Model using the 2015 American Community Survey, U.S. Census Bureau | Current Population Survey, Annual Social and Economic Supplements 1950 and 1970, plus the 2015 American Community Survey, U.S. Census Bureau | Current Population Survey, March and Annual Social and Economic Supplements 2016 and earlier, U.S. Census Bureau

Source: 2015 American Housing Survey, U.S. Census Bureau

Single-Person Households Exceed Nuclear Family Households



America Is Changing

The first step to rebalancing the mismatch between the diversity of the households in the United States and the homogeneity of our housing is a better understanding of the cultural trends and demographic shifts at play.

The five snapshots presented on the following pages dig deeper into defining our contemporary households, which the exhibition characterizes as:

- **The Aging Nation**
- **Family Fluidity**
- **Going Solo**
- **Parenting Alone**
- **The Shrinking Middle**

The numbers make it clear that these are long-term trends, decades in the making, not simply short-term trajectories. The implications for the housing market are significant.

22%
of Americans will be
age 65 or older in 2050

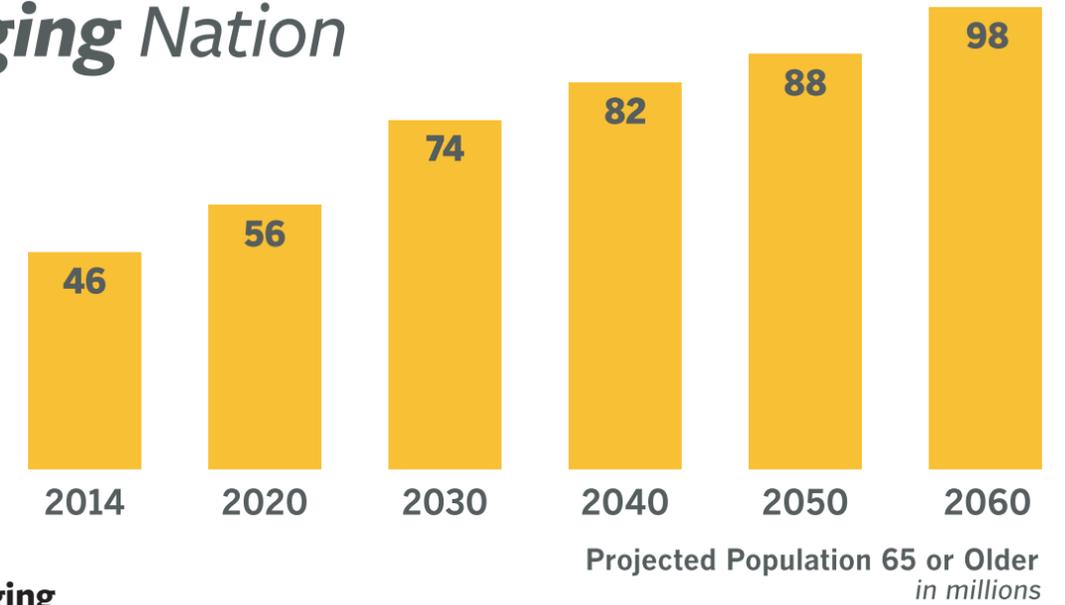
32%
of young adults
live at home

48%
of adults are single

27%
of children live with
a single parent

11%
fewer American
households were middle
class in 2015 than in 1971

The Aging Nation



America Is Aging

The country's population of older adults is experiencing unprecedented growth.

- By 2030, more than 1 in 5 people in the United States will be age 65 or older — and by 2035, older adults are projected to outnumber children for the first time ever.
- In the 2018 AARP Home and Community Preferences Survey, 77 percent of people age 50 or older said they wanted to stay in their current community for as long as possible; 76 percent said the same about their current residence. Among people age 65 or older, 86 percent said they wanted to remain in their current community and home.
- Most homes in the United States are not designed for aging in place. Many people will require solutions that respond to the changing physical and cognitive abilities that come with growing older.
- Two increasingly popular trends that address the issue are multigenerational living and home-sharing, both of which can provide on-site assistance and help ward off isolation.

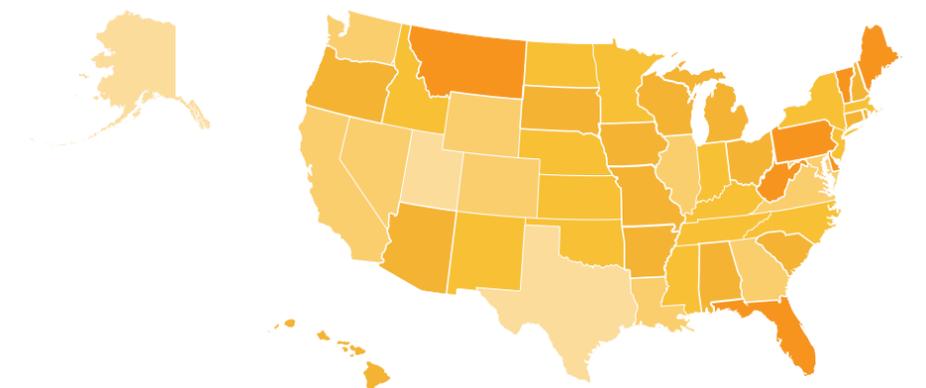
Ask Yourself:

- **Have you considered what sort of housing you'll live in when you're older and, perhaps, less mobile?**
- **Will you be able to live in your current home?**
- **Would you consider downsizing?**
- **Would you be willing to share a home with friends? Or a tenant?**

Older Adults by State

Percent of Population 65+ by State

- 9% – 11.3%
- 11.4% – 13.6%
- 13.7% – 14.7%
- 14.8% – 15.9%
- 16% – 18.6%



Sources: 2014 and 2017 National Projections, U.S. Census Bureau | CHPC Making Room Household Model using the 2015 American Community Survey, U.S. Census Bureau



32.1%

Living in parent(s)' home

Family Fluidity

Living Arrangements for 18- to 34-Year-Olds



31.6%

Married or cohabitating in own household



22%

Other living arrangements



14%

Living alone, single parents or other heads of household

Our Households Are Not Static

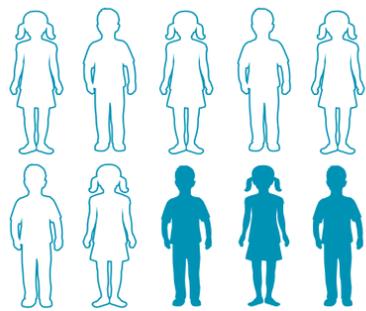
They grow, shrink and morph over time — and these fluctuations increasingly happen on a weekly basis.

- Divorce, remarriage and nonmarital cohabitation result in households that change size throughout the year, month or even week.
- For many, flux is the norm. The U.S. Census Bureau found that over a three-year-period, 31 percent of all children under age 6 experienced a change in the number of parents with whom they lived.
- Since 2014 (and for the first time on record) living with at least one parent has become the most common living arrangement for adults ages 18 to 34.

Ask Yourself:

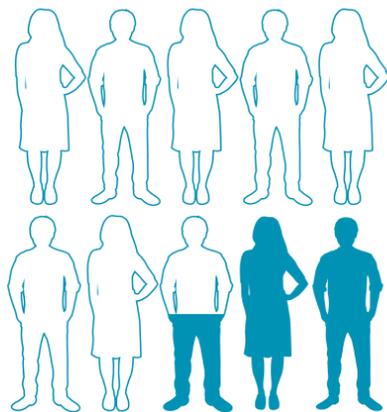
- Do any of the scenarios shown here ring true for you?
- Would your home easily accommodate a weekly or frequent change in the number and needs of residents?
- Would housing that's more flexible make life easier for you?

Family in Flux



31%

of children under age 6 have experienced a change in the number of parents they live with



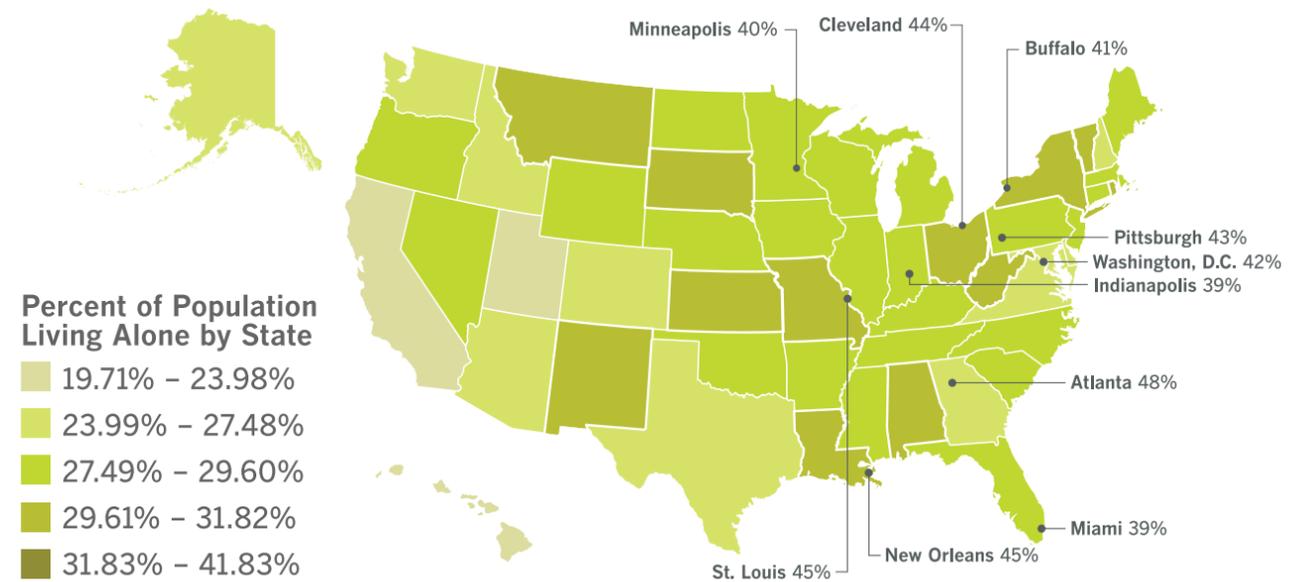
25%

of ever-married population has been married twice or more

Source: Pew Research Center Tabulations of the 1980, 1990, 2000, 2010, 2012, 2013, 2014, 2015, 2016, 2017 U.S. Census Bureau | Survey of Income and Program Participation, 2008 Panel, Waves 1-10, U.S. Census Bureau | American Community Survey, 2008-2012, U.S. Census Bureau

Going Solo

Single-Person Households



There's Been a Surge in Single-Person Households

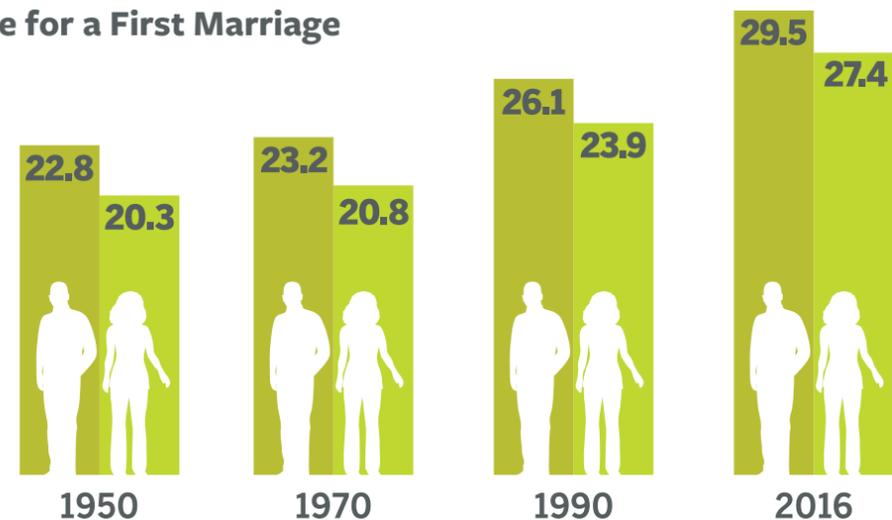
Divorce has contributed to an increase in older singles, and the trend is particularly true for women, who tend to outlive their spouses.

- Nearly half, or 48 percent, of all American adults are single.
- Single people living alone comprise 28 percent of all households.
- Both men and women are delaying marriage. In 1970, women first married at an average age of 20.8 years, men at 23.2. By the mid-2010s, that age had risen to 27.4 for women and 29.5 for men.

Ask Yourself:

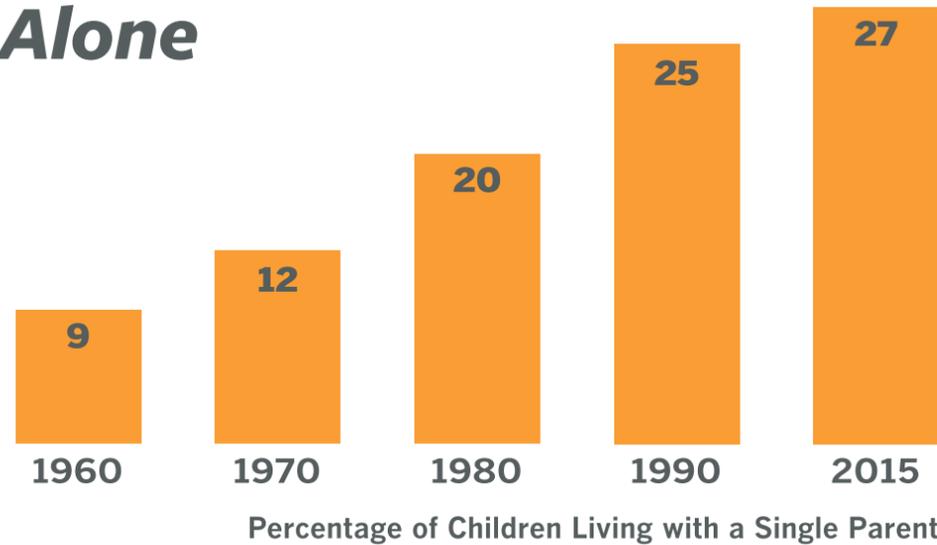
- Chances are, you've searched for housing while single. Was it difficult to find a suitable place to live?
- Have you ever lived with a roommate?
- Do you prefer to live alone?

Median Age for a First Marriage



Source: CHPC Making Room Household Model Using the 2015 American Community Survey, U.S. Census Bureau | Decennial Censuses, 1890 to 1940, plus the Current Population Survey, Annual Social and Economic Supplements, 1947 to 2017, U.S. Census Bureau

Parenting *Alone*



Sources: Current Population Survey, March and Annual Social and Economic Supplements, plus the 1960 Decennial Census, PC(2)-48, Persons by Family Characteristics, Tables 1 and 19, U.S. Census Bureau | CHPC Making Room Household Model using the 2015 American Community Survey, U.S. Census Bureau

Mom or Dad and Children

The percentage of children living in a single-parent household has tripled since 1960.

- This upturn reflects other cultural shifts, including the rising acceptance of divorce and a climbing birthrate for unmarried women.
- Single-parent households typically bring in less than half the median income of married couples. The average cost of center-based infant care exceeds that income by 24 percent.
- For many single parents, sharing housing and/or childcare responsibilities is a social and economic imperative.

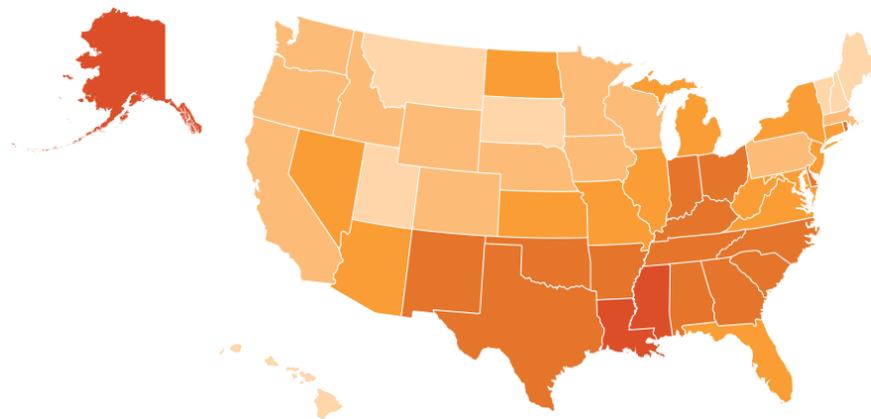
Ask Yourself:

- Is quality childcare available near your home?
- Is it hard to find housing that fits your budget and needs?

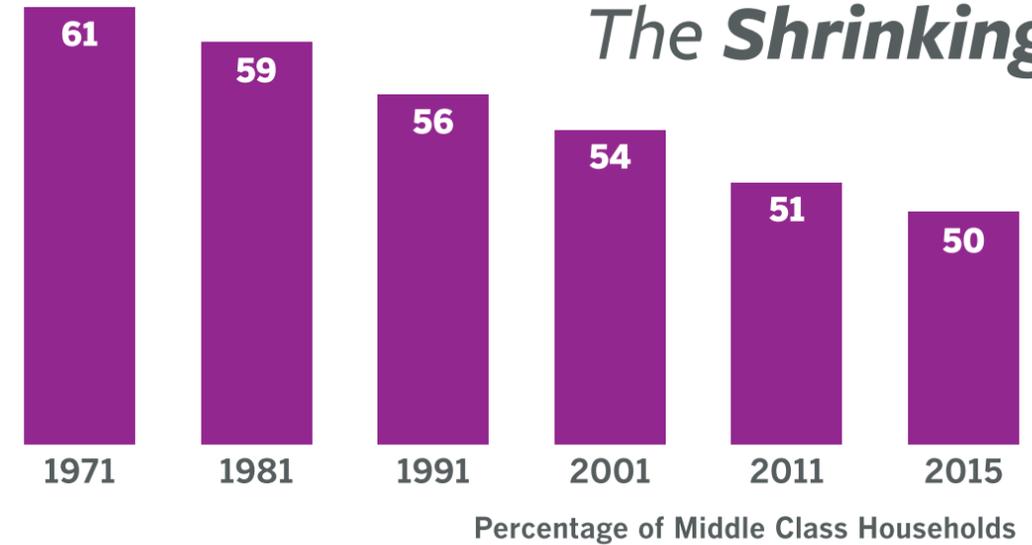
Single-Parent Households

Percent of Single-Parent Households by State

- 4.49% – 5.41%
- 5.42% – 6.28%
- 6.29% – 7.13%
- 7.14% – 8.31%
- 8.32% – 9.95%



The *Shrinking Middle*



America's Middle Class Is Getting Smaller

And it's not just smaller — middle class incomes have stagnated.

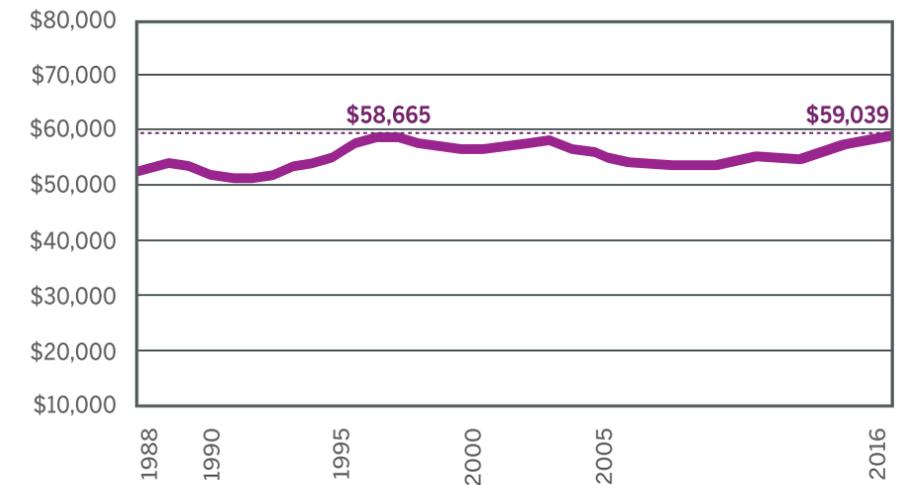
- In 1971, 61 percent of all U.S. households earned between half and two-thirds the median income. By 2015, the share of households in this middle tier had dropped to 50 percent.
- When adjusted for inflation, the U.S. median household income is virtually the same as it was in the mid-1990s.
- Although the median household income has stagnated, median home prices and rents now exceed those prior to the Great Recession.
- There is a widening gap between median household income and median home prices and rents.

Ask Yourself:

- Are you struggling to afford your home?
- Could your family live in a smaller, less expensive space?
- Is it possible to share or rent out part of your home?

Median Household Income (Adjusted)

Income in Thousands of Dollars (1988–2016)



Source: Pew Research Center, The Lost Decade of the Middle Class, August 22, 2012 | Current Population Survey, Annual Social and Economic Supplements, U.S. Census Bureau

Issue: Residential Zoning Often Limits Housing Options

When decisions are made about what gets built, and where, the most powerful tool a community has are its zoning ordinances.

Zoning works in two ways:

1. It limits land use, frequently segregating residential, commercial, industrial and agricultural zones from one another.
2. It directs physical forms by prescribing the size of buildings — often setting *maximums* with respect to height, lot coverage, density and occupancy, and *minimums* specific to unit size, setbacks and parking.

Specifications such as density and setbacks may seem mundane, but they have a tremendous impact on how neighborhoods function.

“I’ve led 17 projects in my development career. All 17 were illegal when I proposed them. The one that’s coming out of the ground in suburban Philadelphia right now took 11 years and two trips to the Pennsylvania Supreme Court to get the zoning.”

— Christopher Leinberger, 2017

Founding partner, Arcadia Land Company, and Chair, Center for Real Estate and Urban Analysis, The George Washington University

Standardized or conventional zoning — adopted once the environmental consequences of the Industrial Revolution became apparent — was championed to protect property values, manage growth, and address public health concerns relating to pollution, overcrowding, and access to fresh air and natural light. All laudable goals.

But communities have been slow to adapt decades-old zoning regulations to changing demographics and housing needs, making it difficult, if not impossible, for new housing models to emerge.

In addition to preventing a market or cafe from opening in a residential area, for example, the rules often separate housing types by prohibiting the comingling of single-family and multifamily residences.

Since it’s far easier for local leaders, planners, designers and developers to stick with the housing forms, placements and layouts favored by the existing code, change is slow to occur.

An Option: Form-Based Codes

Unlike conventional zoning, a form-based code regulates development by controlling the building form first — and building use second — with the purpose of achieving a particular type of place or built environment based on a community vision.

Adapted from “What Is a Form-Based Code?” by Mary Maddan and Joel Russell, PlannersWeb.com

Density

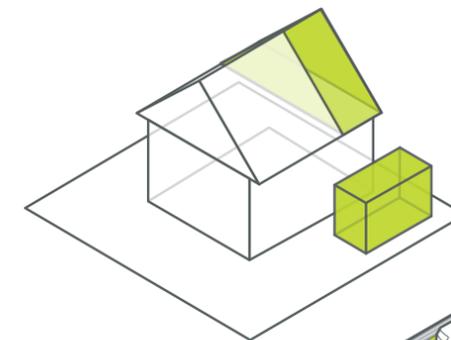
Density refers to the maximum number of residential units that can be built on a particular lot.

Strict density rules limit the construction of multi-unit dwellings in favor of single-family houses. Where multiple units are permitted, density rules tend to promote the construction of larger buildings, making it harder for developers to build smaller ones.

Accessory Dwelling Units

Many zoning codes make it difficult to create legal accessory dwellings.

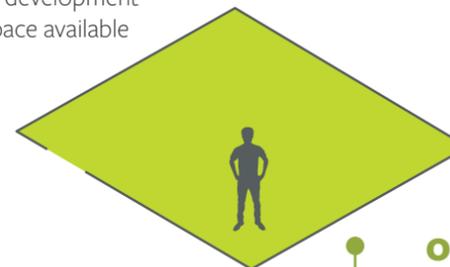
Where permitted, these secondary units share the lot with a primary dwelling and can be either attached or separate — such as an apartment in the basement or a detached garage. (Read more about accessory dwelling units, or ADUs, on page 52.)



Parking

Parking rules address the number of spaces allotted to each unit of new housing.

On-site parking drives up development costs and can limit the space available for housing units.



Minimum Unit Size

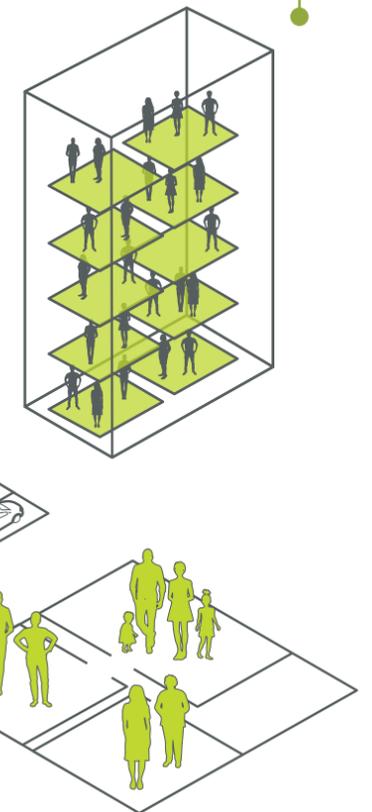
This term refers to the smallest residential unit permitted on a lot.

Strict codes prohibit smaller dwellings such as micro-units and tiny homes.

Occupancy

Occupancy standards regulate the total number of people who can live in a housing unit and/or the number of unrelated adults (often no more than three) who can share a unit.

These rules favor the traditional nuclear family and limit the construction of shared living spaces.



Issue: **Midsized, Walkable Housing Is Missing**

Prior to World War II, the United States had an array of midsize, town-based housing options (such as those shown at right) that are largely missing today. In many places, the housing types were zoned out of existence in favor of more auto-centric patterns of development.

As a result, there's now a mismatch between the nation's available housing stock and what the market wants and needs due to shifting demographics (such as a rapidly aging population and shrinking household sizes) and the growing demand for walkable living.

So-called "Missing Middle" housing is poised to become a critical part of the solution. Where the structures do exist, they often go unnoticed because — and this is a good thing — they blend right in. Even though Missing Middle-style buildings contain multiple households, they are compatible in look and feel with single-family homes.

"Missing Middle housing types are a great way to deliver affordable housing choices by design since they're of a scale that most communities would

support. But they can also hit higher-value niche markets," says Daniel Parolek, founder of Opticos Design and the architect who coined the Missing Middle terminology.

The Missing Middle concept also enables housing conversations — even in communities that bristle at words like "density" or "multifamily."

Discussions can develop around questions, such as: Where will your adult children live if they want to remain in the community? Where will downsizing empty nesters move to? Where will teachers or police officers with moderate incomes be able to live? One answer could be Missing Middle housing.

Communities that have identified their zoning codes as a barrier are either modifying the largely use-based codes or replacing them with a form-based, place-based approach that allows a mix of housing types and land uses. (If you missed the box about form-based codes, see page 16.)

Such mixed-use zoning can enable a street or neighborhood to contain single-family and multifamily homes as well as, say, a small grocery within walking distance — so buying a gallon of milk won't require a drive to the supermarket.

Missing Middle Housing:

1. Is ideally located within a walkable area, close to amenities
2. Never exceeds the size of a single-family house (in height, width and depth)
3. Mixes well with other building types
4. Features small but well-designed residences, often with floor plans similar to those common in single-family homes
5. Can be for sale or rent
6. Creates a sense of community within a building and in the neighborhood

The Types



Duplex: Side-by-Side



Duplex: Stacked



Bungalow Court



Carriage House



Fourplex



Multiplex (Small)



Town House



Live/Work



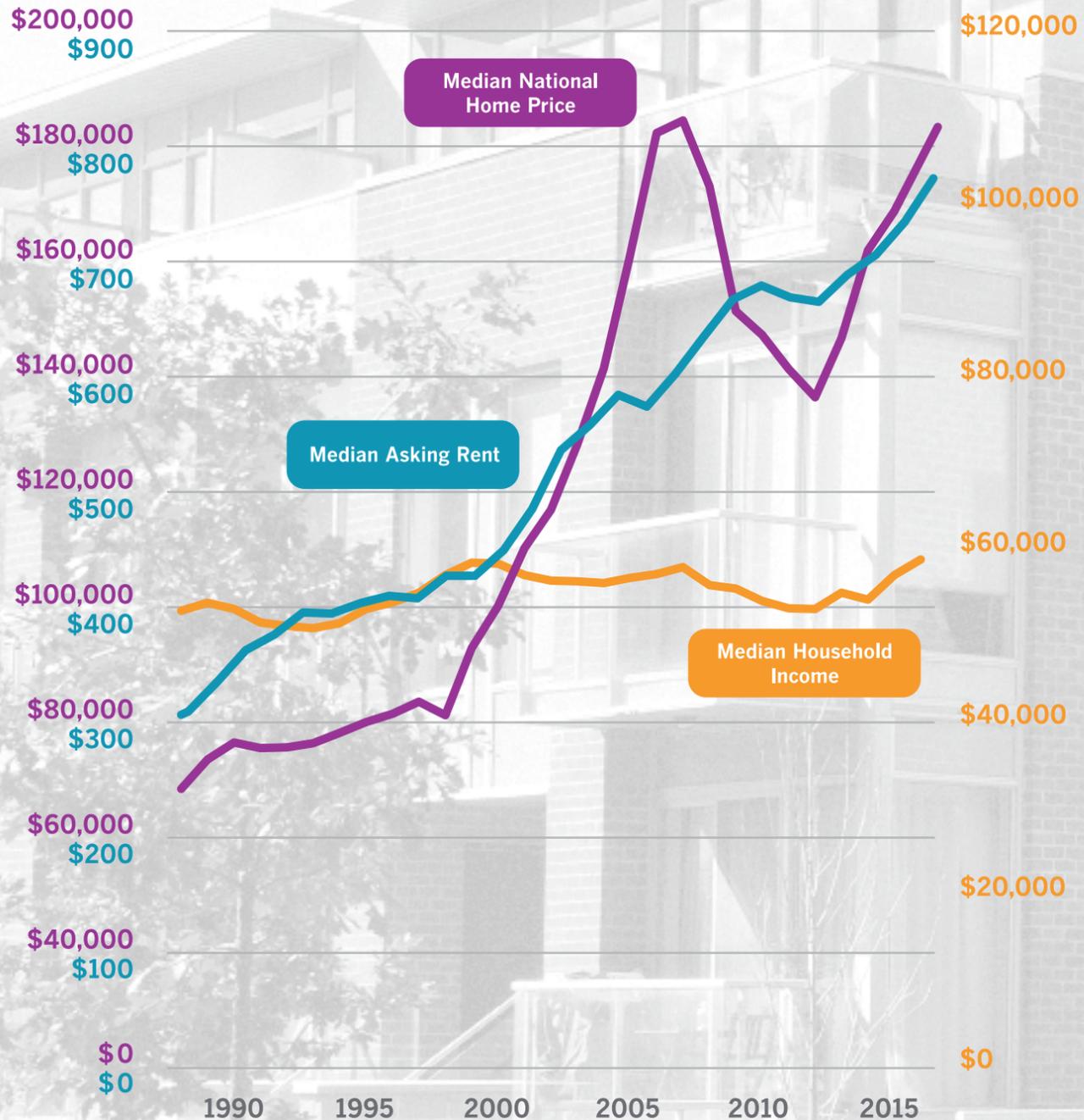
Courtyard Apartments

Streetscape and photos courtesy Opticos Design, Berkeley, California



Issue: *'The Rent Is Too Damn High!' and Home Ownership Is Beyond Reach*

Since 1990, rents and home prices have risen precipitously, but the median household income has stagnated. The result: Millions are struggling to afford housing.



Source: Current Population Survey, Annual Social and Economic Supplements; U.S. Census Bureau | Current Population Survey/Housing Vacancy Survey, Series H-111; U.S. Census Bureau | Standard & Poor's Case-Shiller National Home Price Index

According to recent national data, rent for a modest one-bedroom residence averages \$931 per month, and rent for a two-bedroom averages \$1,149 per month. Anyone earning the federal minimum wage of \$7.25 per hour who worked 40 hours per week is not be able to afford that rent. In 2018, the National Low Income Housing Coalition reported that the federal minimum wage doesn't actually cover these average rents *anywhere* in the United States.

To afford a one-bedroom, a minimum wage earner would need to clock a 99-hour work week; a two-bedroom would require 122 hours a week.

The U.S. Department of Housing and Urban Development (HUD) deems households that spend more than 30 percent of their income on housing to be "cost-burdened." To afford a two-bedroom, for instance, a household would need to bring in at least \$22.10 an hour — or roughly \$46,000 annually — without exceeding the 30 percent threshold. The needed wage could be as much as \$34.48 an hour, or roughly \$72,000 a year, in high-cost cities such as Washington, D.C.

Households considered to be severely cost-burdened pay more than 50 percent of their income on rent. Nearly 40 million American households (or nearly one-third) are cost-burdened.

How Do We Make *Housing More Affordable?*

1. Subsidize the *Housing Supply*

To assist lower-income Americans who are unable to rent or purchase market-rate housing, federal, state and local governments often focus on increasing the supply of affordable, or subsidized, housing.

In this model, developers are incentivized to build, buy and/or rehabilitate housing by receiving tax credits, tax breaks, low-interest loans or direct subsidies. In exchange, housing units are reserved for households that earn a prescribed percentage of the area's median income (or AMI) — an amount that's established by HUD.

Supportive housing uses affordable housing as a platform for providing additional specialized services to individuals and families recovering after a period of homelessness, hospitalization or incarceration.

2. Subsidize the *Housing Demand*

A different approach is to supplement a household's budget with a direct subsidy that can be used on the private housing market. This form of housing assistance is known as a housing voucher.

3. Expand the *Menu, Grow the Supply*

The making-room premise asserts that providing a wider menu of housing designs can help people — especially the underserved single population — find housing they can afford. Some takeaways:

- Homes with less square footage can be less expensive.
- Homes that can be shared allow people to combine their incomes.
- Homes that can be divided into two or more units can generate income for a household.
- Accessory, or secondary, units — such as basement or garage apartments — are likely to be more affordable than a standard apartment. (Learn more about accessory dwelling units by going to page 52.)

Source: National Low Income Housing Coalition, *The Gap: A Shortage of Affordable Rental Homes*, March 2018

Part Two

Creative Thinking Creative Solutions

At first glance, it seems as if the United States has a lot of housing options. After all, the nation is home to an architectural array of housing styles. We've got Cape Cods, colonials, cottages, farmhouses, McMansions, ranches, Tudors, Victorians and more.

But in reality, we have only three basic types of residences: apartments, townhomes and single-family houses. What's truly lacking is affordability, adaptability and variety to meet the diverse and changing needs of individuals and families.

A key message of *Making Room* is that a wider menu of housing designs and layouts would enable people to find housing they can afford, and this is especially true for underserved populations, such as single-occupant households.

A truly livable community includes a range of housing options — at various price points — and allows for different types of housing, including cohousing, home-sharing and secondary housing, such as backyard bungalows, also referred to as accessory dwelling units, or ADUs.

Few homes are able to meet all of an individual's or household's needs over a lifetime. But if housing can adapt to its residents' needs during differing ages and life stages, fewer people will be forced to leave the homes and communities they love.

Part Two of *Making Room* explores how to provide a greater variety of housing options by rethinking:

- The size of homes. Bigger is not always better, and homes with less square footage can be less expensive.
- Who lives in a home and how the residents are related to — or relate to — one another. Homes that can be shared allow people to combine their incomes to cover housing costs.
- How spaces and structures can be divided into separate living units to generate income for a household or enable multiple generations of a family to live independently together.
- What can be done to modify existing homes to make them more livable for the residents who need them.

Making room for America's changing households may not be a simple task, but housing entrepreneurs are stepping up to this 21st century challenge.

The projects and design solutions seen on the following pages offer a glimpse into the future of housing, one where more options of all types meet the ever-shifting needs of the nation's households.

Photo from MichaelWarrenPix, Getty Images/Stockphoto

Big houses in suburban developments (this one is in Orlando, Florida) proliferated in the late 20th century, reaching a peak around 1994. Such housing was typically created along streets with dead ends and little connectivity. Since the neighborhoods are usually separated from commercial areas, business districts and any sort of public transit, owning a car is essential and work commutes are often long.

1. Rethinking Small

More than 50 percent of American households are composed of just one or two people.

That statistic alone argues for taking a fresh look at how to accommodate smaller households. One approach is to do more with less space.

The development of personal digital technology, the growth of the sharing economy and an increasing commitment to sustainability are likewise reducing the amount of space many people need — and want. After all, a smartphone can replace yesterday's desk, personal computer, bookshelves, CD racks and filing cabinets, making it easier to live in a smaller space.

The ripple effects of reducing a home's square footage can be significant: urban buildings can accommodate more households, suburban housing can have a smaller carbon footprint, and prices can be lower.

The projects shown here prove that quality is not proportional to size but to good design. From rural tiny houses to urban micro-units, these examples maximize space with a combination of multifunctional interiors and innovative amenities.



Tiny houses typically include a bedroom loft with upper level windows for plenty of natural light. The homes — which usually contain a kitchen and a bathroom with a toilet, sink and shower — are powered by a generator or a connection to a home or utility pole in the vicinity. Water and propane can be supplied from tanks placed nearby. Wastewater can be managed by use of a composting toilet, a septic system or a gray water recycling system.

Tiny Houses

Tiny houses have captured the popular imagination. Their appeal is often rooted in a desire to simplify.

Technically speaking, most tiny houses are actually recreational vehicles, or RVs. Look closely. Many have wheels (sometimes hidden behind siding) or sit on a towable flatbed.

Unless the house is anchored to a slab foundation and connected to public utilities, a tiny house is not likely to be permitted under an urban jurisdiction's building code requirements for a permanent shelter.

However in communities where they are permitted — such as in rural areas — tiny houses can be a viable and affordable housing option, especially for people who have access to land (such as their own or to a relative's yard or a farmer's field) and are just starting out or looking to downsize.



The interior of an average, efficiently designed, multifunctional tiny house is between 200 and 300 square feet. Tiny house furnishings can be sparse or, in the home shown here, elegant and well-equipped. Many manufacturers offer a collection of options at various price points.



Storage is at a premium in a tiny space but can be cleverly tucked away in stairways, seating or even floors.

Models shown: The Mohican, The Kokosing and Koko 2. Photos courtesy Modern Tiny Living, LLC



The Community First! Village neighborhood consists of 120 micro-homes, 100 RVs and 20 canvas-sided cottages. As of 2017, the community had the capacity to house up to 250 formerly homeless men and women.

Tiny Homes, Big Impact

Community First! Village 9301 Hog Eye Road Austin, Texas

Opened in December 2015
Rents range from \$225 to \$350 a month.

Community First! Village is a neighborhood of tiny houses, RVs and support structures offering permanent housing to individuals who are disabled and/or chronically homeless.

Organized by the faith-based nonprofit Mobile Loaves & Fishes, the village was inspired by the purchase of a used RV in 2005. The master-planned community sits on 27 acres outside of Austin's city limits, which means zoning regulations are not a factor.

The nonprofit provides several amenities and support services on-site, including a medical facility, a market, community gardens and places for fellowship. Residents also have access to microenterprise opportunities such as gardening, blacksmithing and woodworking. A strong corps of local volunteers help with neighborhood upkeep while building meaningful relationships with the residents.

From the **Cass Community** in Detroit, Michigan, to **SquareOne Villages** in Eugene, Oregon, supportive villages for the homeless or housing insecure have been emerging nationwide. The goal is to not simply provide shelter, but to help individuals and families get back on their feet.

Whether transitional or permanent, these neighborhoods offer residents belonging, dignity and hope.



Photos courtesy Mobile Loaves & Fishes



Community First! Village features many supportive and recreational amenities, such as walking trails, a dog park and an outdoor kitchen. Residents can access on-site medical care, social services and a property management office.



In 2014, the Austin chapter of the American Institute of Architects partnered with Community First! Village to hold the Tiny Victories competition. Local architecture firms submitted designs for houses of up to 200 square feet. One of the four winners — Designtrait's Dogtrot House — is shown above and is now common in the neighborhood. The homes have electrical power but no plumbing, so residents share access to a community kitchen and bathroom facilities.

Renderings courtesy AIA Austin and Designtrait
(Becky Jeanes, Tray Toungate, Laura Shipley and Brianna Nixon)



Residents of Community First! Village can supplement their income by selling concessions at Alamo Drafthouse movie screenings on-site.



An art studio, woodshop and blacksmithing forge offer residents the opportunity to learn new skills, express themselves and create items to sell.



Dairy products and fresh produce from Community First! Village are sold at local farmers markets and used in the nonprofit's catering business. Volunteers are encouraged to visit and help residents with harvesting, cooking and canning.



Nearly half of the apartments in Carmel Place were outfitted with flexible furnishings that integrate seating, a wall bed and storage. Additional furnishings were provided through Ollie, an all-inclusive property management company that provides residents with hotel-like services.

Photos by Pablo Enriquez, courtesy nARCHITECTS



Photo by Mekko Harjo, courtesy Ollie

Micro-Units, Urban Access

Carmel Place 335 East 27th Street New York, New York

Opened in June 2016

Eight units are reserved for formerly homeless veterans and 14 units are offered with subsidized rents. The remaining 33 units are rented at market rates, from \$2,600 for a 260-square-foot studio.

In 2012, New York City launched adAPT NYC, a competition to develop micro-units as a new housing model for the city. The strategy addresses New York's changing demographics, especially the rise in single-person households.

To ensure the pilot project's legality, then-Mayor Michael Bloomberg's administration waived elements of the city's zoning ordinance that otherwise prohibited studio apartments smaller than 400 square feet. Monodnock Development, nARCHITECTS and the Actors Fund Housing Development Corporation submitted the winning proposal.

Carmel Place houses 55 studio apartments ranging from 260 to 360 square feet. Thanks to a generous 9-foot-8-inch ceiling height, each unit's volume is close to, or exceeds, that of a typical, code-approved apartment. Coupled with 8-foot-tall windows and Juliet balconies, the small-footprint residences actually feel loft-like. Built with prefabricated steel modules that were stacked on-site, Carmel Place is one of the city's first multi-unit buildings to employ modular construction.

More than 60,000 applications were received for the 14 studios offered with rent subsidies for low-income New Yorkers.



Carmel Place residents share an eighth-floor community room that connects to a roof terrace (above) with sweeping views of the city. Other building amenities include a spacious lobby with lounge seating, a light-filled fitness center, a coffee shop, shared den, laundry room and bike storage. Another perk: The building sits across from a public park.

Photo by Mekko Harjo, courtesy Ollie



The Carmel Place building is composed of four staggered, 11-foot-wide towers, each corresponding to a column of stacked modules. Bricks in four shades of gray were chosen for the facade.

Photo by Iwan Baan, courtesy nARCHITECTS



Carmel Place features five micro-unit floor plans that vary in size and configuration. Most floors of the nine-story building include all five arrangements (shown in the plan above).

Plan courtesy nARCHITECTS



While the Carmel Place modules were under construction at the Brooklyn Navy Yard, the building's foundation and ground floor were being prepared on East 27th Street. The modules were assembled in just four weeks, greatly reducing construction noise and disruptions to the building's Manhattan neighbors.

Photo by Field Condition, courtesy nARCHITECTS



The Arcade, a stately Greek Revival-style 19th-century building, is in the heart of downtown Providence, Rhode Island. Tenants are attracted by the building's proximity to shops, restaurants, theaters and museums.

From Marketplace to *Micro Lofts*

The Arcade Providence 65 Weybosset Street Providence, Rhode Island

Opened in 2013
In 2017, rent for the smallest apartment started at \$900.

Recognized as the nation's first enclosed shopping mall, the Arcade opened in 1828 but fell into disuse in the late 20th century after undergoing several unsuccessful renovations. The structure's cramped quarters proved impractical as contemporary commercial space.

When the building closed in 2008, developer Evan Granoff saw an opportunity to reinvent the national historic landmark as an adaptive reuse and affordable housing success story.

What **The Arcade Providence's** upper-level residences lack in space is made up for with convenient access to lower-level retail shops and downtown Providence. The majority of the 48 units range from 225 to 300 square feet.

“The Providence Arcade is probably the single most important example of commercial architecture in Providence and a building of national significance. The reopening of the Arcade is a monumental, much-longed-for occasion and a great gift to the residents of the city.”

— **James Hall**
Former director,
Providence Preservation Society



When the Westminster Arcade opened to the public in 1828, the building's skylighted, gabled roof ensured a comfortable, light-filled shopping experience similar to those at markets in London and New York at the time.

Photo courtesy the Rhode Island Collection and Northeast Collaborative Architects



The Arcade's micro lofts are located on the second and third floors of what was renovated into a mixed-use development in 2013. The first floor is occupied by retailers and restaurants.

Rendering courtesy Northeast Collaborative Architects



Nearly all of the Arcade's units are furnished with built-in beds and storage. Kitchens include a microwave and mini-fridge, but no stove. The Arcade provides additional on-site storage for residents.

Photo by Ben Jacobsen, courtesy Northeast Collaborative Architects



Bright interior common spaces — such as the center courtyard, roof deck garden and open stairwells — offer opportunities for residents at The Six to engage with one another and the outdoors. Connecting with others and nature are considered vital to their ongoing rehabilitation. On-site support services are provided on the ground floor and are available 24/7.

The courtyard of The Six encourages temperature regulation and airflow. The LEED-certified building includes solar panels and high-efficiency water fixtures.

Photos by Tara Wucjik, courtesy BROOKS + SCARPA



The 14-story, 124-unit John and Jill Ker Conway Residence is located in Washington’s NoMa neighborhood. Shared amenities include a community room, kitchen, computer lab, fitness center and lounge, plus outdoor terraces. The building’s modern, glass, stacked facade is respectful of the historic St. Phillips Baptist Church next door.



Community Solutions, the D.C. Department of Behavioral Health and Veterans Affairs provide Conway residents with on-site support, including occupational and mental health counseling.



Some units at the Conway Residence feature a clear view of the U.S. Capitol. A Wider Circle — a nonprofit that supports people who are transitioning out of homelessness — completely furnished the veteran-designated units.

Photos courtesy DLR Group. Floor plans courtesy Community Solutions

Shedding Light on Housing for Veterans

The Six 811 South Carondolet Street Los Angeles, California

Opened in April 2016

The Six offers 52 supportive homes for people who have experienced homelessness, with 18 units set aside for veterans to rent at about \$500 per month.

Nonprofit organizations have led the way in developing specially designed residences for the nation’s most vulnerable populations. Two stunningly modern, small-unit properties on opposite coasts serve low-income residents, including formerly homeless veterans.

Each project focuses on creating a healthy and inspiring environment, both of which are critical factors for people transitioning out of homelessness or back into civilian life. Designs that emphasize sunlight, for example, are thought to be helpful in mitigating the effects of post-traumatic stress disorder.

The John and Jill Ker Conway Residence 1005 North Capitol Street NE Washington, D.C.

Opened in January 2017

Sixty units are reserved for formerly homeless veterans, 47 are prioritized for households making no more than 60 percent of the area’s median income (AMI), and 17 units are prioritized for tenants making no more than 30 percent of AMI. Rent for a 368-square-foot studio is about \$1,150.

Developed by the Skid Row Housing Trust in Los Angeles, **The Six** was inspired by the military phrase “got your six,” meaning “your fellow soldier has your back.” Brooks + Scarpa Architects grouped the building’s housing units around an open and central courtyard.

Located down the street from the U.S. Capitol, **The John and Jill Ker Conway Residence** in Washington, D.C., was spearheaded by the nonprofit Community Solutions. Designed by Sorg and Associates, the building is oriented and organized to maximize direct access to natural light. The project is among the first of its kind to have full-time case managers from Veterans Affairs on-site.

The John and Jill Ker Conway Residence and The Six both follow the “housing first” model, which is a homeless assistance approach that prioritizes providing people experiencing homelessness with permanent housing as quickly as possible followed by voluntary supportive services as needed.



The John and Jill Ker Conway Residence’s unit types include (from far left) 500- and 400-square-foot apartments, 340-square-foot dormitory-style two-bedroom suites and 250-square-foot single room occupancy housing.



The Cityspaces MicroPAD can be transported by train or a standard pickup truck. The units can be stacked as high as 12 stories in urban infill lots or wherever they might be needed. (“PAD” stands for Prefabricated Affordable Dwelling.)

Prefab Prototypes

Cityspaces MicroPAD San Francisco, California

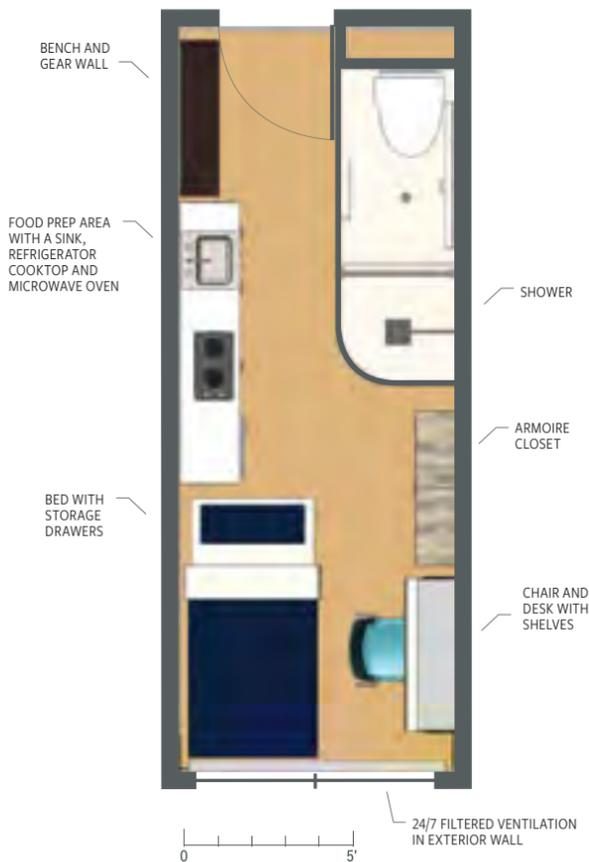
Kasita Austin, Texas

Fully furnished, stackable and transportable micro-homes could be the solution to a variety of housing needs across the economic spectrum.

San Francisco developer Patrick Kennedy created **MicroPAD**, a prototype dwelling his firm proposes as a permanent-housing solution for the city’s homeless. MicroPAD’s all-inclusive design — which also comes in a wheelchair-accessible version — features a private bathroom, kitchenette, bed, desk and armoire. Constructed from steel, the 160-square-foot model exceeds California’s seismic standards.

Kasita micro-homes have been marketed to potential homeowners and developers as either stacked or stand-alone units (see opposite page). The 352-square-foot dwelling incorporates smart technology, state-of-the-art appliances, and hideaway beds and storage.

Both prototypes offer a fast track to shelter. In comparison with conventional construction, prefabrication has the potential to reduce costs and time frames by (depending on location and other variables) as much as 50 percent.



MicroPAD units are engineered with noncombustible steel, which helps reduce noise and prevents pest infestation.

Photos and rendering courtesy Panoramic Interests. Cityspaces® and MicroPAD® are registered trademarks

The MicroPAD’s interior is sleek and modern.



Kasita units are considered permanent structures once they’re installed in their destination location, so the land needs to be zoned properly, building codes need to be met, and permits must be secured.

Photos and renderings courtesy Kasita



The renderings above illustrate Kasita’s stacking potential — either within a supportive framework or on the rooftop of an existing structure.



The Kasita unit’s 10-foot-2-inch ceiling height enables multi-level living with hidden storage. The steps double as drawers. The home comes with a queen size bed that, the designers note, “easily tucks out of sight (without even having to make it).” The manufacturer’s suggested price is \$139,000, and the unit can be delivered in six to eight weeks.

2. Designing for Sharing

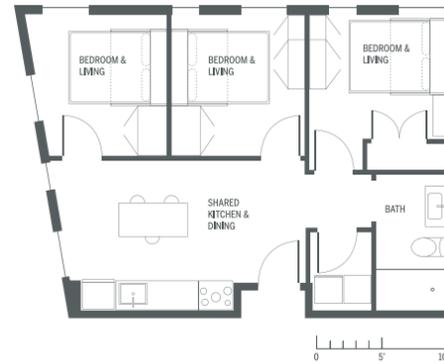
The concept of shared housing is not new. However, most people who share housing with extended family, friends or roommates still do so in spaces designed for a nuclear family.

In response to this reality and the growing popularity of the sharing economy, a surge of housing entrepreneurs are exploring living arrangements that promote alternatives — from co-living or group living to cohousing to co-parenting and beyond. Don't worry, we explain each.

Designers have embraced the challenge of creating spaces for shared and group activities that can actively enhance the quality of life for people living in nontraditional (essentially non-nuclear-family) arrangements.

The amenities in shared spaces are often designed and programmed to foster collaboration between residents, build community and provide connections between private and shared spaces.

Whether driven by developers, nonprofits or individual families keen to chart a new course, these housing solutions illustrate different and, for some, more suitable and affordable ways of living together.



A fully furnished three-bedroom, one-bath micro suite measures about 700 square feet and includes a washer/dryer.

Floor plan by Workshop/APD, courtesy Ollie

Co-Living

Baumhaus 5522 Baum Boulevard Pittsburgh, Pennsylvania

Opened July 2017

Rent for a 664-square-foot, three-bedroom micro suite starts at \$1,100.

In Pittsburgh, where more than 6 in 10 households consist of a single adult living alone or sharing with other adults, **Baumhaus** offers a way to apartment share with upscale perks.

The 127-unit, seven-story building is an unconventional mix of standard units, fully furnished micro-units and shared micro suites that are rented by the room.

The venture pairs Vitmore, a local developer, with Ollie, an all-inclusive, co-living property management company that provides hotel-like services and a live-in community manager to organize social events for residents. This type of arrangement is typical of “co-living” buildings or communities.



Located in the Friendship neighborhood of Pittsburgh, Pennsylvania, Baumhaus is within walking distance of shops, bars and cultural institutions, such as the Carnegie Museum of Natural History and the Pittsburgh Center for the Arts.



The Baumhaus lobby boasts a lounge and upscale kitchen area that's available for private parties and special events, such as cooking demonstrations by visiting chefs. A community manager, similar to a cruise director, organizes activities, gatherings and outings.

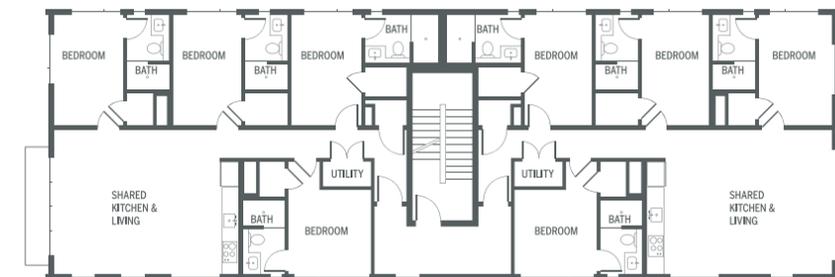


Baumhaus's micro-units and micro suites come with multifunctional furniture. (The sofa becomes a frame for a pull-down bed hidden behind the wall.) Rental fees cover amenities, including high-speed internet, premium television channels and housekeeping.

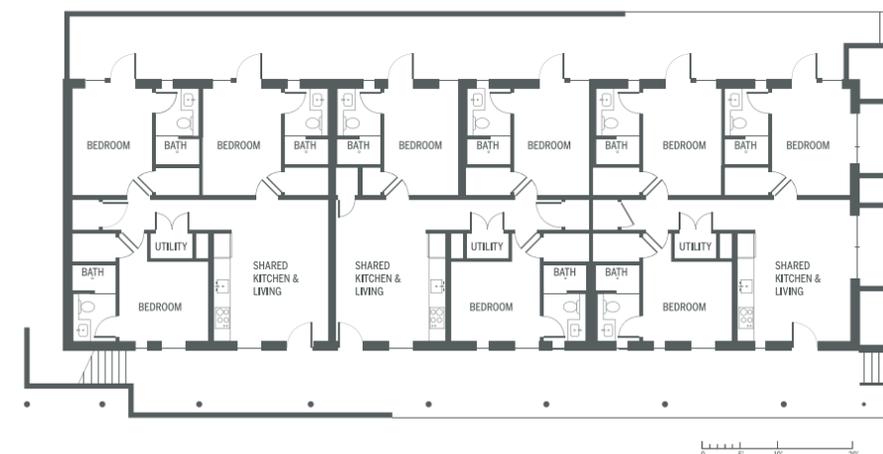
Photos by Ed Zeiler, courtesy Ollie



Oslo is a new building that grew out of an old one. (See the three-story brick building on the opposite page.) The developer needed to preserve the structure's original foundation four feet above grade in order to retain the existing zoning, which allowed for nine units within a height limit of 40 feet. By underpinning the existing foundation and digging a new foundation beneath it, Oslo emerged with four levels of modern living space.



Each of the three upper floors houses two four-bedroom apartments with spacious common areas and either floor-to-ceiling windows or balconies.



Oslo's lower level has three, three-bedroom units with large, private patios.

Building rendering and floor plans by DEP Designs, courtesy Ditto Residential

Group Living

Oslo(shaw)

1734 6th Street NW
Washington, D.C.

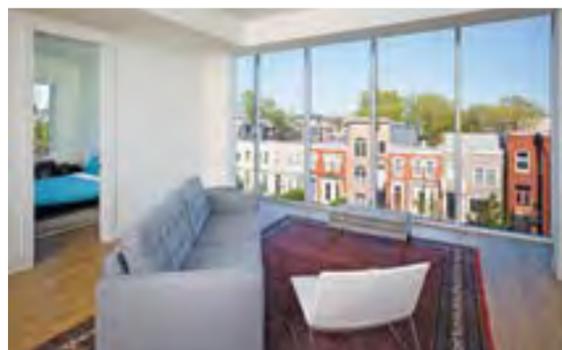
Opened December 2014

In 2015, rent for a room in a three-bedroom unit started at \$1,200.

Developer Martin Ditto purchased a modest apartment building in 2012 with the intention of creating **Oslo**, Washington, D.C.'s first apartment building designed to embrace contemporary roommate-style or group living. The project fills a gap between a typical shared row house (at a lower price point) and a private studio or one-bedroom apartment (at a higher one).

Architect Chuong Cao carefully calibrated the size and proportions of Oslo's floor plans, especially the shared kitchen and living spaces. Each of the building's 33 bedrooms, featuring a private bath and closet, are essentially the same, a design decision that minimizes the need to adjust rent levels and allows each apartment-mate to have his or her own similarly sized space.

Quickly deemed a success, Ditto doubled down on the concept, opening two more D.C. group living buildings. Oslo(atlas) opened in 2017 and Oslo(admo) in 2018.



Plentiful windows on all four levels guarantees an abundance of natural light in all the units. Oslo's upper-story units enjoy panoramic views. The building's higher-end materials and finishes are expected to help reduce maintenance costs.

Photos by Patrick Ross, courtesy Ditto Residential

“We wanted to get into a little trouble, make money and be successful ... but break the mold, something that was not just what everyone else was doing.”

— **Martin Ditto**, president, Ditto Residential



The building before (above) and after (right) the renovation. In addition to its location in a revitalized inner city neighborhood, Oslo's original building had a number of advantages, including a height limit that had not been maximized and eight-foot setbacks on both sides of the lot. On one side, this space was used for an entry bridge and lower walkway; on the other, the space supports lower-level terraces.

Original building photo courtesy Ditto Residential





A section view shows an internal staircase (left side) that connects the floors within each of the building's three-story "neighborhoods."

Rendering ©Perkins Eastman, courtesy WeLive

Turnkey Neighborhoods

WeLive Crystal City
2221 South Clark Street
Arlington, Virginia

Opened in April 2016
Rent for a 300-square-foot studio starts at \$1,640.

WeWork — a global leader in the on-demand, co-working office space market — is the creator of WeLive, an on-demand, turnkey co-living provider. The experimental concept meshes the convenience of a fully furnished apartment and the flexibility of a hotel stay with the social and communal advantages associated with dorm living.

WeLive Crystal City, co-located with two floors of WeWork offices, offers a mix of micro studios and suites ranging from 300 to 800 square feet. All but the smallest of the 216 units include complete kitchens.

Unlike with a more typical apartment, residents forgo larger private quarters and relative seclusion in favor of hip, amenity-filled spaces expressly designed to facilitate living and playing with others. There's a Sunday night dinner and other programmed activities, such as yoga.

To foster ownership of the meet-and-mingle spaces, the design team interspersed them throughout the converted office building, creating three distinctive three-story "neighborhoods" featuring a combination of apartments, shared living areas and a fully equipped chef's kitchen. The WeLive app, which includes a neighborhood email list, reinforces the community concept.



As part of the office-to-residential conversion, WeLive Crystal City's building exterior received a colorful makeover and a garden with outdoor seating and a play space. Both WeLive and WeWork are pet friendly.

Photos ©Assembly Studio 2016, courtesy WeLive



Each WeLive neighborhood revolves around a communal kitchen and dining space (top), as well as a media lounge (the red couches). Residents, also known as "members," have access to all of the building's amenities — from coffee bars and reading nooks to the library, laundry/game room (above right) and a fitness studio/screening room.



Each fully furnished micro-apartment includes built-in cabinetry, a bed, linens, towels, kitchen housewares and a wall-mounted high-definition television as well as high-speed internet. Tenants can simply arrive with their clothes and move in. As in the Baumhaus (page 36), the sofa becomes a frame for a pull-down bed hidden behind the wall.

Photos ©Assembly Studio 2016, courtesy WeLive (top and above left) and ©WeWork/Lauren Kallen, courtesy WeLive (left and above right)



This group photo was taken at Pacifica Cohousing's 10th anniversary party. The community's founding families helped plan, design and construct the neighborhood, which welcomes newcomers, including singles and retirees.

Cohousing

Pacifica Cohousing 137 Viburnum Way Carrboro, North Carolina

Opened May 2006
Seven units were sold and are managed through the Community Home Trust.

Intentionally created by like-minded individuals or families, cohousing neighborhoods combine the value of private homes with the benefits of more sustainable group living.

These communities, which are typically created by residents rather than by developers, can address roles traditionally played by extended families, such as assistance with childcare or eldercare. Participants commit to actively engaging in the governance of the housing development, most often through a homeowners association.

Formed in 2001, **Pacifica Cohousing** is adjacent to Chapel Hill and sits on eight rolling acres only a mile from downtown Carrboro, North Carolina.

The residents worked with an architect to design an environmentally friendly and affordable neighborhood of 46 townhomes, duplexes and single family residences clustered around the Common House. Essentially functioning as the community's family room, this shared space includes a playroom, kitchen, dining room, meeting areas and laundry facilities, as well as a guesthouse. Other amenities are scattered throughout the development.



Pacifica's commitment to green living includes passive solar design, solar hot water and radiant floor heating. At the time of its construction, the rooftop solar array on the Common House was one of the largest in the area.

Photos by Trine Christensen, courtesy Philip Semanchuk



The Common House is the heart of the Pacifica Cohousing community. It's a space where neighbors gather to share meals, celebrate holidays, hold meetings and participate in weekly activities (such as yoga and karaoke).



Winding footpaths connect the residences and provide safe areas for children to explore and play away from cars, which are parked on the community's perimeter. A guesthouse includes three bedrooms and two bathrooms for visitors.



Residents (more than 100 strong) participate in the upkeep and management of Pacifica by contributing at least four hours of work per month. The neighborhood includes two organic gardens and on-site rainwater cisterns.

Cohousing's Backstory

In a cohousing community, residents enjoy the benefits of having both a private home and shared spaces. Pioneered in Denmark in the 1970s, modern cohousing was introduced to the United States in the early 1990s, when architects Charles Durrett and Kathryn McCamant created Muir Commons in Davis, California. More than 150 cohousing communities have been established since, with the largest number clustered in California, Colorado, North Carolina, Virginia, New England and the Pacific Northwest.



The four-story Aria Cohousing building is home to 28 condos — from one- to three-bedrooms — two of which are fully accessible for people with mobility differences. Many of the units feature private balconies or terraces. A large communal kitchen, dining area and community room are now in what was once the convent's rectory. Additional shared spaces include a library, guest suite, sunroom, outdoor patio and courtyard plus gardens.

A Fast Track to Cohousing

Aria Cohousing Community
2835 West Parkside Place
Denver, Colorado

Opened August 2017
Eight of the property's 28 condos are designated affordable and sold for no more than 80 percent of the area's median income. In 2018, two-bedroom, market-rate units were selling for about \$450,000.



The exterior of the former convent (top), which was constructed in the mid-1950s, is virtually unchanged and retains its distinctive bell tower, red roof and buff-colored-brick facade. Members of the Aria Cohousing Community participated in all aspects of the project's development, from a series of design meetings held in 2015 (above) to the 2016 groundbreaking and periodic construction-watch tours.

Photos and illustrations courtesy Urban Ventures, LLC

In 2005, the Sisters of St. Francis sold their home, Maycrest Convent — and 17.5 of the 20 acres surrounding it — to Urban Ventures, a local developer.

Since the sisters embrace the ideals of community improvement and environmental stewardship, the sale was based on trust and a shared vision of how the land, and the convent, would be redeveloped. Although Susan Powers, the president of Urban Ventures, couldn't make any guarantees, reconfiguring the convent for cohousing seemed like an ideal and viable option.

Aria Cohousing, which is part of a larger urban infill project called Aria Denver, represents a twist on the cohousing concept — one where a developer jump-starts the community-formation process and leapfrogs financing hurdles. This can be an effective fast track to cohousing.

Originally proposed as cohousing for seniors, the Aria Cohousing Community that ultimately coalesced is multigenerational.

“We’ve been waiting and praying for cohousing ever since we heard it was possible.... It’s sort of a layperson’s experience of what we do in religious life. Everyone gets to have community life.”

— **Sister Patty Podhaisky**
Sisters of St. Francis,
Sacred Heart Province



The Aria Cohousing Community is adjacent to a small urban farm in the center of a mixed-used neighborhood. As shown in the site plan above, the convent-turned-cohousing-community is surrounded by row houses, townhomes and apartment buildings.



Colorful shutters in each unit's private patio space open to encourage connections with neighbors.

Housing for Grandparenting

Las Abuelitas Family Housing 440 East 26th Street Tucson, Arizona

Opened September 2013
Residents must be at or below 80 percent of the average median income for their family size.

Championed and designed by grandparents, **Las Abuelitas Family Housing** is a small, ADA-accessible (see page 78) and affordable housing community that addresses the multigenerational needs of its residents.

This pioneering kinship-care housing project began in 2012 when the Tucson-based Primavera Foundation met with a group of grandparents raising their grandchildren through foster care or adoption.

The caregivers shared their vision for a safe place where they could collectively provide childcare and assist one another.

In later meetings, the group detailed specific requests, including homes with an open kitchen and dining area, some private, enclosed outdoor space, a large community room and a “hang out” space for older kids. Having a strong resident council and programming for all ages were also deemed critical to the plan.

Poster Frost Mirto, the architecture firm responsible for the design of Las Abuelitas (a Spanish endearment meaning “grandmothers”), delivered on those requests and created a model of sustainable design and efficiency. Several of the units qualify as “net zero,” meaning they produce as much energy through renewable resources as they consume.

Family Matters

Kinship care is the full-time care and nurturing of a child by a nonparent relative or someone who has a significant emotional relationship with the child.

Although Las Abuelitas is bound by a secure perimeter, a community building serves the wider neighborhood as well as Abuelitas residents. A computer lab, library, kitchen and multipurpose room host after-school activities for kids and civic, financial and other workshops for the grandparents.



Metal shades (above) help diffuse the sunlight and provide a bit of shade over the private patios and shared walkways. A rooftop rainwater collection system and solar panels help maintain the landscaping and keep energy costs down. These LEED Platinum sustainable features give Las Abuelitas an advantage over most low-income housing developments.



Las Abuelitas' 12 housing units — eight two-bedrooms and four three-bedrooms — are designed to accommodate mobility differences. Of the estimated 60,000 grandparents in Arizona who are raising their grandchildren, 1 out of 5 have a disability.



Intergenerational activities and a safe place to play were among the top requests from Las Abuelitas' founding grandparents. The outdoor community spaces include a playground, basketball court and common greenspace. Each household also has its own plot in the community garden.

Photos and plan courtesy Poster Frost Mirto, 2015

Do college residence halls have to be on a campus? Not anymore. The basics of co-living in dormitories may not have changed — but the location has.



Students from the San Francisco Conservatory of Music, the California College of the Arts, and the University of California, Berkeley, can study in reading lounges located on each floor or socialize in the Panoramic's lobby "living room."

Student Housing Reimagined

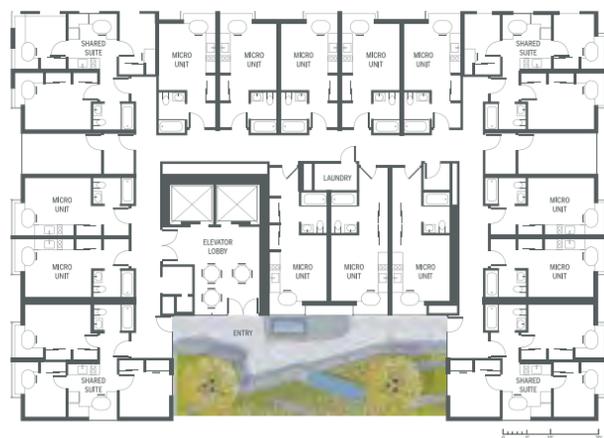
Panoramic Residences 1321 Mission Street San Francisco, California

Opened 2015
Costs vary by the affiliated college, but leases generally start around \$1,450 a month.

The first micro-unit project approved by the San Francisco Planning Commission, the **Panoramic Residences** cater exclusively to students and interns looking for an off-campus, urban living experience. The building includes 120 two-person studios and 40 four-person (three-bedroom) apartments, each with a full bathroom (featuring an extra-deep soaking tub) and a sleek, contemporary kitchen. The units come with flat-screen TVs, laundry facilities and lounges. Similar to the Las Abuelitas project described on the preceding pages, several of the units qualify as net zero.

Students choose from leasing a bed in a shared (176-square-foot) or private (97-square-foot) bedroom. The rooms come with panoramic views and all-inclusive utilities.

Photos and floor plan courtesy Panoramic Interests



The 12-story building's studios and suites range in size from 274 to 630 square feet. Outdoor living spaces include the courtyard, seen in this plan, and a rooftop garden deck.



La Casa Student Housing 1818 South Paulina Street Chicago, Illinois

Opened 2012
Leases are based on financial need but generally start at about \$450 a month for a shared room or \$650 for a single.

Initially created to provide undergraduates in Chicago's predominantly Latino Pilsen neighborhood with safe and affordable off-campus housing, the **La Casa** dormitory now serves students from throughout the area. All of the city's major colleges and universities are within a 15-minute ride from the nearby 18th Street Pink Line transit station. The building provides commuter students with a college dorm experience that enables them to focus on their studies and avoid the distractions and stresses that often arise when living at home.



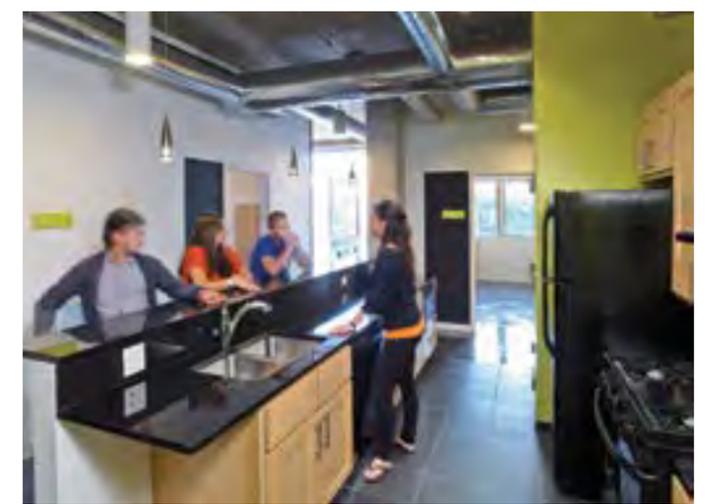
An important feature of La Casa is its on-site, bilingually staffed Resource Center (above), which offers mentoring, tutoring, networking and internship opportunities as well as job placement services.

The La Casa dormitory is an initiative of The Resurrection Project, an education-focused nonprofit committed to increasing the college graduation rate of typically underserved Chicago-area young people. Nearly 100 percent of the building's first group of residents earned their bachelor's degree.



Each 10-person suite contains five bedrooms plus a shared kitchen (pictured) and living area. Among the amenities available in the six-story building: free Wi-Fi, a computer lab, flat-screen TVs, laundry rooms and a fitness center.

Photos by Anthony May, courtesy UrbanWorks, Ltd. Floor plan courtesy The Resurrection Project



Matchmaking for Home-Sharing

Housemate-matching services help connect people who might not otherwise find one another. They guide homeowners and renters through the matching process and co-living experience. Responsible providers conduct background checks and multiple interviews, supervise meetings and, if necessary, mediate conflicts. Most older adults want to remain in their current home, but often are unable to manage the duties living alone and caring for a home require. Home-sharing for older adults can literally put their house to work for them. Life can be easier and more fulfilling with the friendships that follow.

Affordable Living for the Aging Los Angeles, California

Founded in 1978

Affordable Living for the Aging (ALA) is a trailblazer. Its housing providers are homeowners or renters (average age 75) who want to share their home and have at least one available bedroom. Housing seekers (average age 65) don't want to live alone or can't afford to do so. ALA prescreens and monitors the home-shares it fosters. Both parties in the home-share must be mentally, emotionally, physically and financially self-sufficient.



Lois was 66 when she moved into a home owned by Shirley (left), a 95-year-old widow. The arrangement lowered Lois's housing costs and provided Shirley with a friend and helper. "I tell her what to do and she does it," the homeowner jokes.

Photo courtesy Affordable Living for the Aging

Home-Share Stats

According to the 2018 AARP Home and Community Preferences Survey, 16 percent of people age 50 or over say they're willing to share their home or already do. Why? Nearly 60 percent say they can use the help, 50 percent would like the companionship, 49 percent cite the extra income.

Home Share Now Barre, Vermont

Founded in 2001

Home Share Now connects older people who want to rent space in their homes to singles in need of affordable housing. In 2016, Home Share Now paired more than 115 people, 85 percent of whom were low-income. "Home-sharing keeps you engaged with the world," says Cindy (pictured below with her renter). "You have someone to talk to about their and your day. You share meals. You go to church together, and you become involved again."



Cindy rents space in her home to Monika (right).



After Shirley had a bad fall, she and her husband, Don, decided they needed help. By assisting with chores and driving, Cliff reduced his rent and saved enough to buy his own condo.

Photos by John Lazenby, courtesy Home Share Now

CoAbode Santa Monica, California Launched in 2000, coabode.org

CoAbode matches single mothers who are looking to pool resources, share housing and help one another with the responsibilities of parenting. The biggest plus: By sharing housing costs, the mothers are able to afford more comfortable living arrangements in safer neighborhoods. After creating an online CoAbode profile, a woman becomes part of a database through which she can communicate safely with like-minded mothers. Criteria such as desired location, school district, schedule, parenting philosophies and interests are all taken into account during the matching process. The company also offers online resources for medical care, financial planning and legal issues.



CoAbode members report saving an average of 56 hours a month previously spent on childcare, household and transportation responsibilities. CoAbode Friend Circles connect nearby single moms for carpooling, support and fun.

Photo courtesy CoAbode

"I met my roommate at a CoAbode support group. We all became friends first (we both have 5-year-old boys), which helped. We took the time to iron out a lot of details before we agreed to become roommates.... We felt sure that we could mesh our lives under one roof. But I never dreamed it would be this amazing. Simpler. Better. Happier. Easier. Cheaper."

— Danielle, CoAbode member,
Washington, D.C.

Nesterly Boston, Massachusetts Launched in 2016, nesterly.io

Nesterly was developed by two urban planning graduates of the Massachusetts Institute of Technology to pair empty nesters who have space to spare with millennials looking for housing they can afford.

The web-based company finds and vets potential homeowner-tenant matches. Boston has plenty of potential shares due to a high concentration of universities and colleges close to spacious residences occupied by older homeowners.

"We're like Airbnb but designed for home-sharing, not home-renting. It's a win-win for everyone," says co-founder Noelle Marcus. Nesterly charges a nominal fee. Renters and hosts work out the prices and details. Tenants have the option of reducing their rent by helping with household chores or other tasks.

Using the capacity of single-family homes more efficiently can translate into more affordable housing in fully built-out, established communities. Also, says a retired professor and Nesterly host named Jeffrey: "There's so much loneliness in America these days. It's a really debilitating thing for many people. Just in terms of your own spirit, it's a good thing to have other people, and particularly younger people, around."



Nesterly connects older homeowners who have spare rooms to college students (typically graduate students) in need of housing. Ryan, a grad student, resides with Sarah, who has lived in her Boston home for three decades. "My friends are very jealous," she said about having a helpful roommate.

Photo courtesy Nesterly

3. Two Homes (or More) in One

Accessory Dwelling Units (ADUs) are self-contained, secondary housing units that exist within or adjacent to a primary residence — such as in the basement, the garage, on an upper floor, in an attached addition or in the backyard.

ADUs provide flexible solutions.

These separate-but-related apartments or cottages permit owners of single-family residences to capitalize on their investment, typically boosting property value. An ADU can enable homeowners to legally rent out a backyard bungalow or attached apartment — or move into the smaller residence and rent their primary, larger home instead. (The ADU is considered part of the original property and can never be sold independent of it.)

An ADU can allow older adults to age in their existing home with live-in care, or make it possible for homeowners to provide adjacent housing for their aging parents or their adult children, grandchildren, or other family or friends.

Such small-home options help to improve housing affordability and diversify a community's housing stock without changing the physical character of neighborhoods.

Cities including Portland, Seattle, San Francisco, Atlanta, Los Angeles and Washington, D.C., have reformed and liberalized their zoning regulations pertaining to ADUs. The entire state of New Hampshire has done so as well.

How Do You ADU?

You may be familiar with the concept of Accessory Dwelling Units, even if you don't recognize the term or its acronym. Following are a few of the more common names for these separate, secondary living spaces:

- Alley Flat
- Backyard Bungalow
- Backyard Cottage
- Basement Apartment
- Carriage House
- English Basement
- Garage Apartment
- Garden Cottage
- Granny Flat
- In-Law Suite
- Laneway House
- Ohana Unit
- Sidekick

Why ADU?

According to the 2018 AARP Home and Community Preferences Survey, people age 50 or over who would consider building an ADU said they'd do so to:

- Provide a place for a loved one to stay who needs care (84%)
- Provide a home for family members or friends (83%)
- Have someone living close by to feel more secure (64%)
- Have a place for guests (69%)
- Increase the value of their home (67%)
- Have a place for a caregiver to stay (60%)
- Earn extra income from rent (53%)



Lock-Off Studio

One University Crescent
9300 University Crescent
Burnaby, British Columbia, Canada
Constructed in 2005

Accessory dwellings typically take the form of rental apartments above garages, in basements or in a backyard. **One University Crescent** is unique in that it adds a separate — or lock-off — studio to some of its two-bedroom, two-bath condominiums.

This lower level studio is accessible from the main unit via an internal staircase or an exterior hallway, and it includes a kitchenette, full bath and private terrace.

Proximity to Simon Fraser University makes the studio an ideal student rental, but the flexible setup would easily work for a live-in caretaker or use by extended family. Alternatively, it could serve as a master bedroom.

The two-bedroom-plus condominium floor plan shown below measures a generous 1,459 square feet. The midrise building is located in the Burnaby Mountain Conservation Area outside of Vancouver.

Photo and floor plan courtesy Millennium Development Group





The Grippi project is a second-story 560-square-foot, one-bedroom ADU. The owner's working studio space is behind the carriage doors of the new garage. The living unit is used to host visiting family.



The ADU entrance stairway is accessed through the side yard, behind a slatted cedar screen wall. This feature acts as a guardrail and hides mechanical equipment, including an energy-saving tankless gas water heater and HVAC heat pump.

“I’ve always enjoyed small dwellings carved out of forgotten urban spaces. Designing an ADU presents unique spatial challenges, which often result in a richer design solution. It’s a lot more fun than designing with unlimited space.”

— Jack Barnes, principal
Jack Barnes Architect, PC

Reducing Regulations

Grippi Garage ADU and Moray Eco Cottage Portland, Oregon Constructed in 2014 and 2013

Portland, Oregon, stands out as one of the nation’s most supportive municipalities for accessory dwelling units. The city repeatedly relaxed or removed restrictions and incentivized construction by waiving the infrastructure impact fees that were especially onerous on the homeowners seeking ADU permits.

Between 2010 and 2016, Portland issued just short of 2,000 ADU building permits, a steep rise over the previous decade. Two interventions — easing design and setback standards (2015) and allowing ADUs to be used for short-term rentals (2014) — coincided with a surge in issued permits. In 2016, in excess of 600 permits were issued, more than double the number from 2014.

Portland’s ADU boom is providing architects, such as Jack Barnes, with an opportunity to specialize in the design of these compatible, compact and multifunctional apartments. His accessory dwellings projects (including the **Grippi Garage** and **Moray Eco Cottage**) have transformed basements, sheds and garages into usable, profitable, energy efficient living spaces.



This detached garage underwent a radical transformation and expansion to become the Moray Eco Cottage. The homeowner wanted a small dwelling that could serve as a guesthouse or short-term rental until she was ready to downsize and occupy the space herself.



The 508-square-foot Eco Cottage was built using sustainable building practices to reduce dependency on nonrenewable energy. Continuous exterior insulation and high-performance windows prevent heat loss. A specialized ventilation system provides fresh air.

Photos and rendering courtesy Jack Barnes Architect, PC



Yvonne Chang (in red) lives side-by-side with her son and his wife in a Spanish Revival Next Gen home.



Each suite in a Next Gen home has its own private front entrance and many have access to a shared outdoor space, such as this covered terrace.

Under One Roof

Next Gen The Home Within a Home Launched by Lennar Arizona in 2011

Lennar is the country's first national home builder to offer new homes specifically designed to accommodate multigenerational households. Developed in direct response to the growing trend seen during the Great Recession, **Next Gen** models address the needs of large families with adult children and/or aging parents.

Launched by Lennar Arizona, Next Gen floor plans incorporate a self-contained suite — which has a bedroom, bathroom, kitchenette and living area — into the first floor of an otherwise traditional single-family home. The suite has two doors: one is a private entrance and the other connects to the larger, main house. Some suites also include a private one-car garage.

The arrangement provides maximum flexibility for the suite's residents, who can choose when to opt in to the larger household's activities (or seek assistance) and when to function independently. Next Gen models are available in more than 300 communities in at least a dozen states. Other national builders — such as KB Homes, PulteGroup and Ryland — have followed suit to offer similar options.

Next Gen® and The Home Within a Home® are registered trademarks



Marshall Wilkinson and his daughter, Savannah, prepare to frost cookies in the kitchenette of her Next Gen suite.



A two-car garage is standard for Lennar's Next Gen homes, which can be upgraded to include an additional one-car garage, as seen on the front left of the Colonial Revival version of the Independence (top), a model sold in Virginia. In most models, the private entrance to the suite is next to the front door of the main house. Here, Bill Clark and his father chat outside of their respective front entrances.



In this typical Next Gen floor plan the main home appears in orange and the suite is shown in blue.



Each suite's kitchenette includes a refrigerator, dishwasher and microwave convection oven, but not a stove. That omission is one way the suites avoid being prohibited in areas that don't officially allow accessory dwelling units.

Photos and floor plan courtesy of Lennar Corporation

Independent Yet Interconnected

Choy House Queens, New York Constructed in 2014

The **Choy House** is an inspired solution for an extended, multigenerational family.

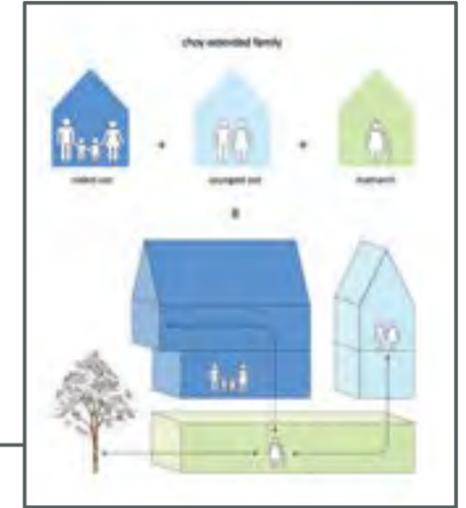
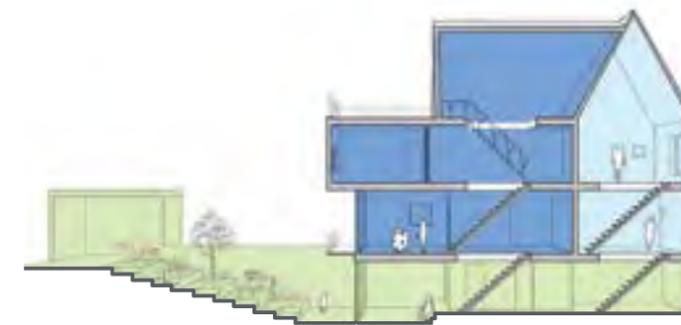
Three independent but interconnected spaces coexist under one roof, enabling each branch of this Chinese American family — a couple with two children, a brother and his wife, and the brothers' mother — to have a private space as well as areas where they can come together.

The two brothers live as neighbors: their separate entrances are only a few feet from each other. The rear of the house is occupied by the family of four, while the front is used by the two-person household. The apartments connect to one other by a shared family room on the lower level, which is where the grandmother lives and can enjoy the terraced garden seen at right.

Although multigenerational living is common in some countries, most suburban, single-family homes in the United States are not conducive to this dynamic. The Choy House illustrates how discrete, shared spaces may be all that's needed to maintain family harmony.



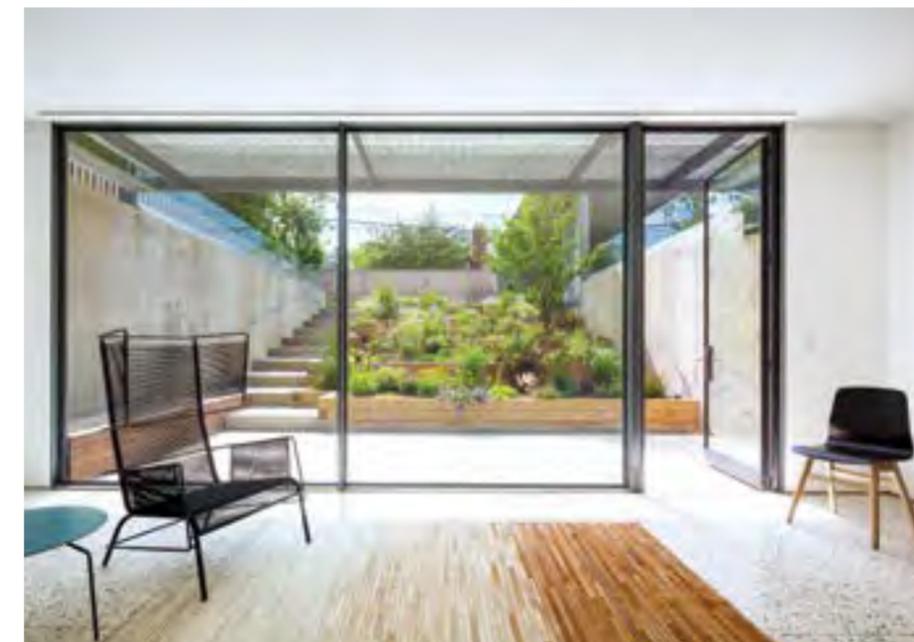
This color-coded section and diagram delineate how the Choy House is divided into three separate but linked zones — one for each household.



The house includes two sets of internal staircases, one for each of the brothers' homes. To maintain an open floor plan, both sets of stairs are located along an exterior wall. A spacious and accessible bathroom includes a convenient, curbless shower.



Although the scale and style of the Choy House stands in contrast to its immediate neighbors, the structure is respectful of its suburban context. Different materials on the exterior distinguish the home's separate spaces.



A lower-level family room joins the two other sections of the house and opens onto a terraced garden that's used by the extended family.

Photos by Michael Moran. Photos and diagrams courtesy O'Neill Rose Architects



An exterior staircase provides a separate entrance for second floor inhabitants and direct access to the front porch. The wooden slats provide privacy, but also let in sunlight and air to help ventilate the home.



In the pictured configuration, the lower level is used as bedroom space. But if the internal stairs (right) are closed to create a rental unit, the larger room can become a kitchen, dining and living area.



Evolving Space, Versatile Living

Shotgun Chameleon House

Houston, Texas

Constructed in 2015

The **Shotgun Chameleon House** has the ability to adapt, chameleon-like, to the needs of its inhabitants, the neighborhood and the local climate. Conceived as a prototype, the home's inherent flexibility grew from designer Zui Ng's desire to create an economically and environmentally sustainable house.

When the internal stairway is closed off, the three-bedroom, two-bath, single-family home transforms into a duplex for use as a rental or separate housing for additional family. Upstairs residents can enter their home through the external staircase. Dividing the home into two distinct units gives the homeowner yet another alternative for the lower level: a commercial office space.

The home's exterior screen element is equally adaptable and could be reconfigured to channel or block prevailing winds or sun. Possibilities include wooden siding, louvered wooden slats, solar panels or shady vines. The porch in the Houston design is partially obscured by a mesh screen, meaning residents can enjoy their private deck and still see and connect to the neighborhood. Constructed with renewable materials and full of green-energy features, the home has the potential to reduce both the owner's mortgage and utility costs.



The Shotgun Chameleon House's unconventional exterior successfully mediates between its two neighbors — a more traditional residence and a modern, multifamily building.



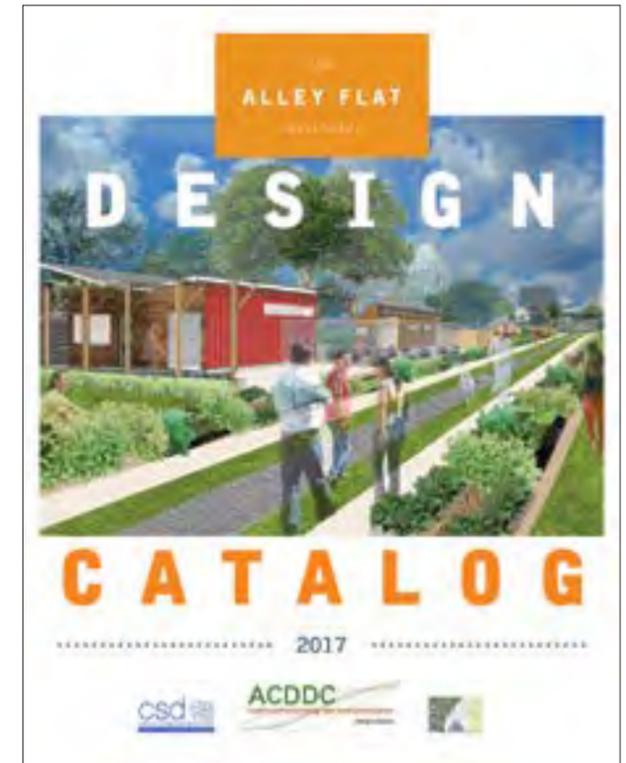
Living and dining space on the second floor are extended by a deck immediately off of the family room.



“This home is inspired by raised, shotgun houses of the Gulf Coast and the versatility of chameleon skin. Flexibility and adaptability of interior space is key to the design.”

— Zui Ng, principal
ZDES Studio

Photos by Paul Hester. Photos and floor plans courtesy ZDES



Affordable Alley Flats

The Alley Flat Initiative Austin, Texas Launched in 2005

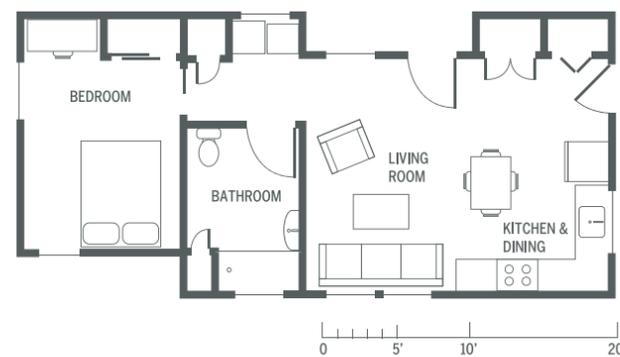
A unique partnership between three nonprofits and the city of Austin is helping property owners with under-utilized lots and alley access build affordable and sustainable accessory dwellings.

To receive assistance, the property owners commit to the city's SMART (Safe, Mixed Income, Accessible, Reasonably Priced, Transit Oriented) Housing Program for five years. This requires that the household income of their tenants be at or below 65 percent of median family income and the rent not exceed 28 percent of the tenant's household monthly income.

In return, the Austin Community Design and Development Center (ACDDC) works with the property owners to manage an expedited process that includes reduced rates and fees. ACDDC architects and managers are responsible for the design, construction and permitting of the alley flat. Clients can save on fees and construction costs by choosing a predesigned model from *The Alley Flat Initiative Design Catalog* (shown at far right).

Spearheaded by the University of Texas School of Architecture in 2005, the Alley Flat Initiative is a collaboration between the University of Texas Center for Sustainable Development, the Guadalupe Neighborhood Development Corporation and the ACDDC.

This one-bedroom, one-bath, 584-square-foot flat (called the Lydia) is ADA-accessible and has a covered front porch.



“The objective of the Alley Flat Initiative is to create an adaptive and self-perpetuating delivery system for sustainable and affordable housing in Austin. The ‘delivery system’ includes not only efficient housing designs constructed with sustainable technologies, but also innovative methods of financing and home ownership that benefit all neighborhoods in Austin.”

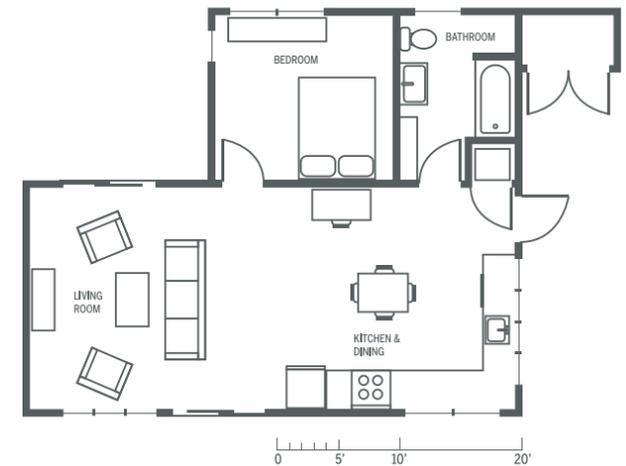
— The Alley Flat Initiative



The two-level Canterbury model (pictured above) has 830 square feet of living space. This one-bedroom, two-bath flat includes an upper level flex space that can be an office, hobby room or additional bedroom. Open house tours of the Alley Flats promote the Alley Flat Initiative, encourage new construction and help build a strong advocacy network.



The Alley Flat Initiative Design Catalog contains more than a half-dozen home designs of up to 850 square feet. The minimum lot size for building an alley flat in Austin is 5,750 square feet, which is about one-tenth of an acre. The house must be a minimum of 10 feet away from the property's principal structure.



The midsize 695-square-foot Primavera model includes a high-efficiency heating and cooling system plus an outdoor storage shed and rainwater catchment system. The interior features a generous kitchen and living area.

Photos by Sam Gelfand (opposite page) and Jody Horton (this page). Photos and floor plans courtesy the Alley Flat Initiative

The 'Granny Pod'

MEDCottage

Virginia

First delivered in 2012

Caring for an elderly or ailing relative, especially one living alone, is a concern for many families.

Before 2010, adding a freestanding backyard dwelling for a family member would have violated zoning rules in Virginia. A state law loosened the restrictions to allow the placement of "temporary family health care structures" on privately owned residential lots. Such "medical ADUs" are permitted in a handful of other states.

Developed by the Rev. Kenneth J. Dupin of N2Care in Blacksburg, Virginia, the MEDCottage caters to older adults who have mobility and medical issues and want to live with family while maintaining a level of independence. The prefabricated, customizable, portable 12-by-24-foot residence (dubbed a "Granny Pod" by the media) is equipped with touch-illuminated flooring, sensors that monitor vital signs and alert caregivers and doctors to problems, and audible reminders to take medication.

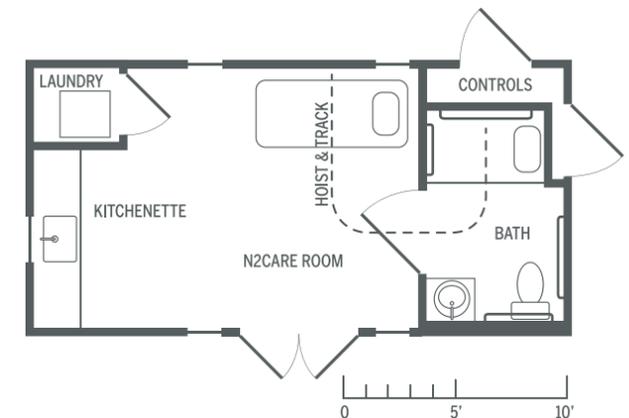
A MEDCottage can be a viable and often more affordable alternative to assisted living. The units can be rented for less than \$1,000 a month or purchased for about \$85,000.

"Some people may see this as unloving, but for myself, I see this as a welcomed option for us 'independent spirits.' It not only preserves the dignity of having your own space, but would lessen the intrusion into [a] caregiver's or family's home."

— Grace, Facebook user



The MEDCottage has room for a bed, living area, kitchenette and ADA-accessible bathroom. Soft flooring helps cushion the impact of falls. (The company claims you can drop an egg from 18 inches without it cracking.) A ceiling track rail is available for a mobility lift if one is needed.



The 288-square-foot cottage is prefabricated with steel floor systems, walls and joists. It can be purchased from a distributor, delivered and then installed by a local contractor. The french doors and entrance ramp easily accommodate a wheelchair and medical equipment.

Photos and floor plan courtesy N2Care LLC

The MEDCottage is connected to the main home's plumbing and electrical lines. Smart features include temperature controls and a Feet Sweep camera, which transmits floor-level video, alerting caregivers to falls.

4. Creating a Home for All Ages

It's been true in the past and — according to the 2018 AARP Home and Community Preferences Survey — it's true today. The majority of people age 50 or older want to remain in their current home and community.

In 2015, Home Matters, a coalition focused on promoting more affordable homes and better communities, announced a universal design competition in partnership with AARP, AARP Foundation and Wells Fargo.

The challenge: transform an outdated, 1960s Memphis ranch house into a home that can safely accommodate the ever-changing needs of a growing family so the owners will be able to stay — and age — in place.

The project's renovation budget: \$75,000.

The broader goal: Showcase solutions that can be widely adapted and replicated in other homes.

Home Today, Home Tomorrow

Design Challenge House Memphis, Tennessee Completed February 2017

The winning entry for the Re-Defining Home: Home Today, Home Tomorrow Design Challenge from IBI Group–Gruzen Samton reimagined how a typical 1,400-square-foot suburban ranch house functions internally and how it relates to the outdoors.

The concept embraced universal design throughout by eliminating all steps up to the porch and into the house; adopting an open plan, generously reportioning the bathrooms, hallways and doorways; installing a curbless shower; and incorporating multiheight countertops in the kitchen and main bath.

While the renovations were underway, a local U.S. Army veteran named Walter Moody was chosen from a pool of eligible military veterans as the recipient of the renovated home.

The project lives on through videos and an online tool kit targeted to architects and builders as well as homeowners. (Learn more at HomeMattersAmerica.com.)

Universal Design Defined

Universal design makes things easier, more usable and accessible for the greatest number of people, including older and younger individuals, people with disabilities and people without them.



The winning design team opted to enclose the carport, converting it into an expanded kitchen and dining area — a decision that added 200 square feet of living space (left) within the home's original footprint (below).

Plan rendering courtesy IBI Group–Gruzen Samton



Wells Fargo donated the house used for the design challenge. Despite its single-level layout, the house posed several obstacles — including multiple steps, tight doorways and out-of-reach amenities — for occupants and visitors with diverse abilities or needs.

Photo by Benjamin Rednour. Photo and floor plan courtesy Home Matters



These renderings, part of the winning team's competition entry, present an open home connected to the outdoors and its neighborhood through expansive windows, an extensive deck and terrace and raised-bed planters.

Design renderings courtesy IBI Group–Gruzen Samton





BEFORE

Removing the wall that separated the paneled den from the original living room allowed the designers to create a larger, open space and free-flowing layout. Two sides of the space adjacent to the front door were outfitted with sliding partition walls (visible in the top right photo), allowing the space to easily transition from an open area into a bedroom.

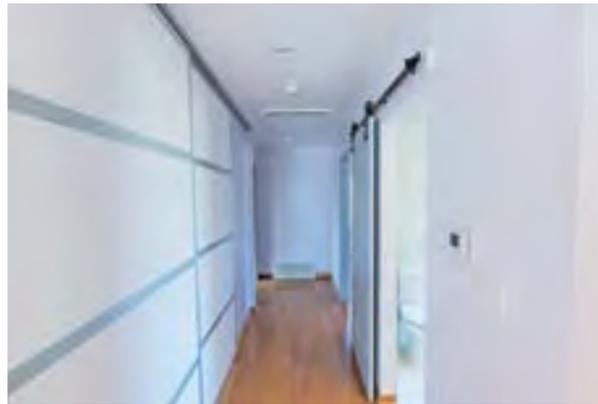


AFTER

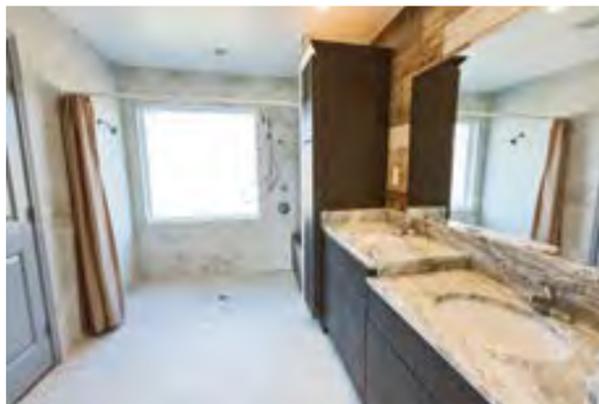


BEFORE

Hallway elements — closets, doorways and doors — were reconsidered and (as shown in the image above) either widened, eliminated or mounted onto easy rolling or gliding tracks.



AFTER



AFTER

The main bathroom features a curbless shower with a built-in bench, stationary and adjustable showerheads, ample storage and two vanities of varied heights.



AFTER

The newly light-filled kitchen offers direct access to the exterior deck. The work surfaces are at multiple heights, and the appliances are accessible. A sliding partition allows the space to be opened up to or closed off from the rest of the house.

“Truly universal design is about appealing to the mainstream, not a specific audience segment or community. The home designs should be aesthetically pleasing, attractive and functional to varying age groups, flexible, seamless and relevant to any demographic. We want to see the next generation of innovative design elements that equally apply to a young family with strollers as to aging grandparents who have regular visits from their grandchildren.”

— Re-Defining Home: Home Today, Home Tomorrow competition brief



Before moving into the renovated home (left), Walter Moody was living in a walk-up apartment. His mother, Mary (shown below), who uses a wheelchair and a walker, was unable to visit. The home’s new, gently sloped front walkway and driveway eliminated the need for steps leading into the house, allowing Mary to participate in the ribbon-cutting ceremony.



“Architects have social responsibilities,” says Mar Granados, adviser to the winning design team, about creating homes where people can age in place. “We cannot just ignore parts of society because we are not there or we think that’s not our client. It is our duty as architects to respond to social issues. If we don’t address these issues, we’re ignoring our future.”

Photos by Benjamin Rednour, courtesy Home Matters

Part Three

Welcome to 'The Open House'

The Open House is not your standard single-family home. It's a three-bedroom, two-bath house — *with a twist!*

Custom-designed for the National Building Museum's *Making Room* exhibition by architect Pierluigi Colombo, The Open House has a hyper-efficient layout, movable walls and multi-functional furniture that enables it to meet many of the nation's housing needs.

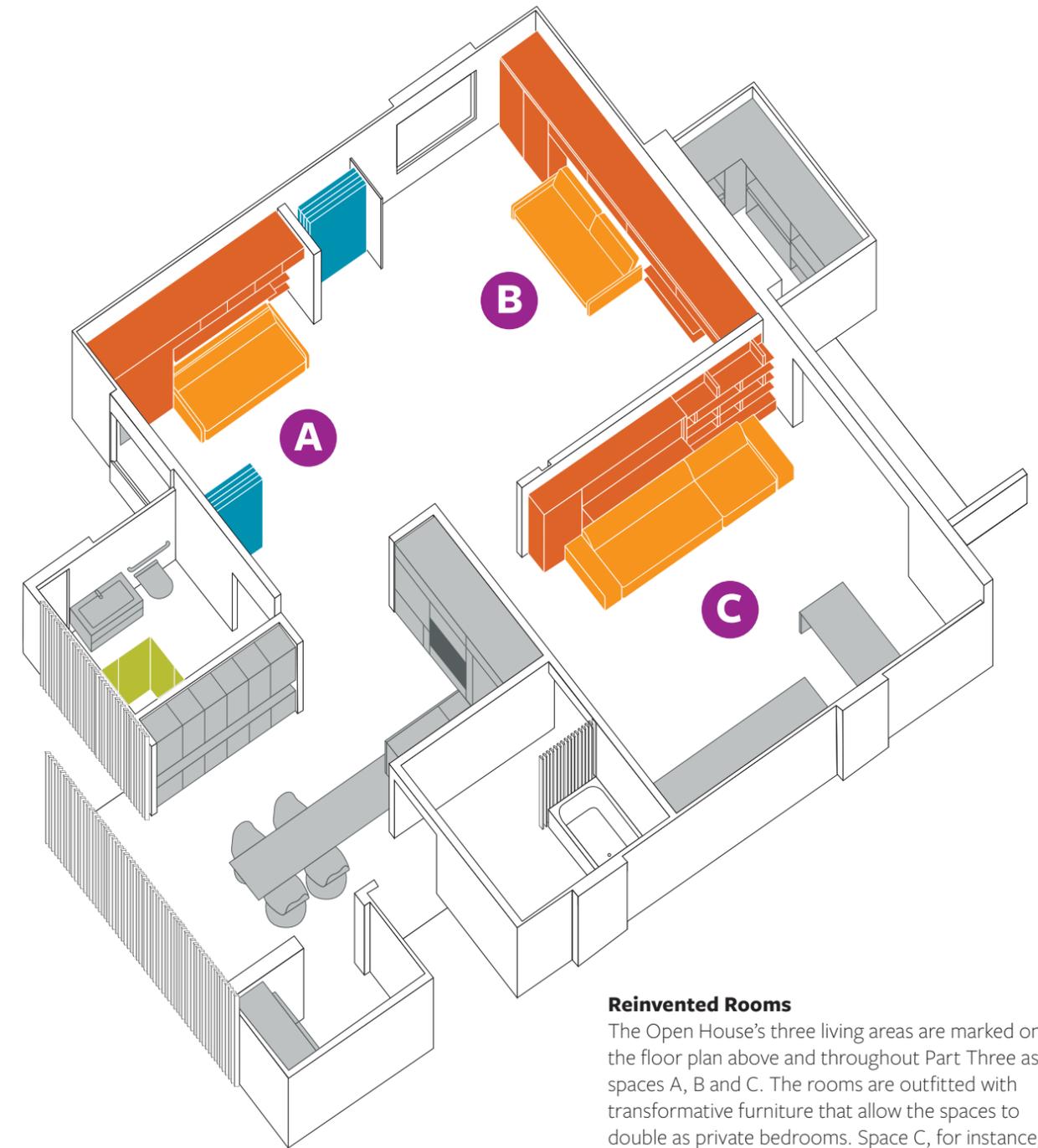
At 1,000 square feet, The Open House is an example of the many ways thoughtful, flexible design can transform how we live. The following pages show how the same space can seamlessly accommodate three entirely different household living arrangements, specifically:

- Roommates sharing the home but also having their own spaces
- An extended family (a child, mother and grandmother) sharing the home
- An empty nest older couple who might occupy the entire house or rent out a portion of it



Ease and convenience for all residents — no matter their ages or abilities — are of paramount consideration throughout The Open House.

- An adjustable-height kitchen peninsula with an integrated induction range allows users to cook while standing or seated.
- The dishwasher opens with a gentle knock on its door and the kitchen's fixtures, cabinetry and appliances have all been optimized for ease of use by people with limited strength, visual acuity or range of motion.
- In one of the home's two full bathrooms, a shower enclosure folds away to enable access by someone using a walker or wheelchair.



Reinvented Rooms

The Open House's three living areas are marked on the floor plan above and throughout Part Three as spaces A, B and C. The rooms are outfitted with transformative furniture that allow the spaces to double as private bedrooms. Space C, for instance, can be converted into a self-contained studio apartment for added income or as an option for live-in assistance.

Wonderful Walls

By moving a wall with the push of a button, The Open House transforms as the needs of its residents change. The home's partition walls travel along ceiling tracks and vertically fold and collapse onto themselves and out of the way. The walls are finished with a woven textile covering and are insulated to provide stellar soundproofing. Some of the partitions are wired to hold electronics, such as a flat-screen television.

-  Movable partition walls
-  A space-savings sofa and pull-down wall bed with built-in storage
-  A zero-step, walk-in "foldable" shower

The Roommates

With three roommates, each can have a private, acoustically sound bedroom. The kitchen, laundry room and two bathrooms are shared.

Or one roommate or a couple gets the separate room (space C) with a private bath and the other two roommates share the second bathroom.

Or two roommates or couples share the home and turn one of the spaces into a shared living room.

There are so many options!

To accommodate a couple and two single adults, the layout (shown) maximizes private space. When the movable walls are fully closed, each roommate has complete privacy; when fully retracted, with the touch of a button, bedrooms can be combined to create a larger room (A and B) for socializing. The residents share the kitchen. All three bedrooms are outfitted with a space-saving wall bed and built-in storage.



Open and closed, day and night configurations for roommates.

Renderings courtesy Resource Furniture



The top image shows a spacious living room (A and B). Notice the flat-screen television on a wall panel in the center of the room. When beds are needed, the room's two sofas disappear beneath the pull-down wall beds. The wall shelf and the items on it move to the floor undisturbed. With the push of a button, a wall unfolds and divides the space into two rooms with a door between them.

Photos by Carl Cox, courtesy Resource Furniture



The Open House contains two full bathrooms, each with convenience and safety features for residents of all ages. A grab bar for getting into and out of the deep tub is helpful to all users. The glass enclosed stall shower (above) is step-free and allows for seated showering (just bring in a stool). When not in use, the shower's glass walls and door can be folded flat against the tile wall.

Photos by Yassine El Mansouri

The Extended Family

To meet the needs of a multigenerational household, The Open House accommodates living communally, but with flexibility. The walls can be arranged like the roommate scenario seen previously. Or the house can be set up as two studio suites with a shared kitchen.

In the floor plans shown here, the residents convert their living spaces into bedrooms by lowering sofa wall beds, with a grandmother in the separate room (C), for instance, and a mom and child in the dividable larger space (A and B).

During the day, the movable walls can be retracted to share living spaces — although the grandmother’s space remains separate in case she wants to retreat. In the evening, the mom can deploy the wall between the spaces to carve out a bedroom (B) for the child. This allows the adults to move freely throughout the rest of the space, and even entertain, when the child is asleep.



Open and closed, day and night configurations for an extended family.

Renderings courtesy Resource Furniture



At night, this television-equipped sitting room or den (A) transforms into the mother’s bedroom. (The pull-down wall bed is hidden behind the sofa and shelving.) A towel bar from the bathroom with the foldaway shower can be seen near the left edge of the photograph.

Photo by National Building Museum staff



Photo by Allan Sprecher



Photo by National Building Museum staff



Photo by Allan Sprecher

The photograph at top shows the large room (spaces A and B) with the dividing walls folded away. At night, the walls can be extended to create two private rooms, one with bunk beds. The top bunk can be tucked out of sight while the bottom bed is kept out (above left). When both bunks are put away, a work surface appears (above right). The doorway to the right of the toy shelves leads to a large, well-organized walk-in closet.

The Empty Nesters

A couple or individual can take over the entire house, which becomes rather spacious with a bedroom, living room and dining room or, instead, a home office.

The house can also become two separate apartments, one of which can be rented or used by a caregiver. In such a scenario, the more separate living area (C) can be converted into a legal, self-contained studio apartment by installing a kitchenette in part of the space's large closet. A door from the room to an outdoor patio becomes the apartment's private entrance.

The studio includes the adjacent tub-equipped bathroom. The couple uses the bathroom with the no-step, walk-in shower and retains sole use of the home's kitchen.



Open and closed, day and night configurations for empty nesters.

Renderings courtesy Resource Furniture



The kitchen peninsula can be raised or lowered by pushing a button.



When the more separate living area (C) is turned into a studio apartment, the furnishings include a sofa with a pull-down wall bed (top). Tucked away along the opposite wall is a table for dining or working. Hidden behind what looks like a large closet door (the one colored black, blue, white and gray) is a kitchenette with a fold-down countertop or breakfast bar.

Photos by Yassine El Mansouri

Certified Aging-in-Place Specialists (CAPS)

Developed in collaboration with AARP, this National Association of Home Builders' designation is earned through coursework and testing. CAPS designees (many of whom are designers, remodelers or health care providers such as occupational therapists) understand the physical needs of older adults and people with mobility differences. Depending on their expertise, CAPS can recommend, design or implement solutions that enhance a home's safety and comfort. To learn more, visit NAHB.org/CAPS.

Inside The Open House

Here's a look at some of the many attractive and functional universal design features and products in The Open House. ADA refers to the Americans With Disabilities Act of 1990, which established accessibility design standards for public and commercial accommodations.

Bathrooms

- ADA-compliant vanities with removable, handle-free drawers and self-close technology
- Handle-free medicine cabinets with LED sensor lighting
- Push-button on-off controls for the faucets and showerheads
- ADA-compliant wall-mounted sink and toilet (pictured below)
- Height-adjustable hand shower
- Useful and decorative grab bars
- No-step, foldaway shower
- Skid- and scratch-resistant glazed porcelain wall tile



Photo by Yassine El Mansouri

Kitchen

- Height-adjustable countertop/dining table with an integrated induction cooktop and digital kitchen scale
- Lower-height countertop
- Handle-free and electric-assist cabinet drawers and doors with interior lighting
- ADA-compliant knock-to-open dishwasher
- Touch-control appliances
- Accessible-height oven and warming drawer
- Height-adjustable seating
- Backlit LED handles and cabinet interiors
- LED lighting with ADA-height toe kicks
- Cabinet with an integrated, motorized, retractable television (pictured below)
- Pull-down cabinet shelving
- Bar sink with an adjustable-height basin
- Countertop with an integrated, pop-up charging station
- Push-button faucet controls



Photo by Carl Cox, courtesy Resource Furniture

Studio Apartment Kitchenette

- Transforming console/desk/dining table (shown open, below)
- Modular kitchen (shown open, bottom) with a sink, two-burner induction cooktop, refrigerator, dishwasher and convection/microwave oven



Photos by Yassine El Mansouri

Laundry Room

- Pocket door with an integrated ironing board and cubbies for storing supplies (pictured below)
- Compact, front-loading washer and dryer on a raised pedestal with drawers and a built-in step that can hold a laundry basket during loading and unloading (pictured bottom)



Photos by Carl Cox, courtesy Resource Furniture

Living Spaces

- Motorized, high performance acoustic partition-wall system with an integrated TV (pictured below)
- Queen wall bed/sofa systems with integrated modular storage and interior LED lighting
- Twin bunk wall bed/desk system with integrated modular storage and interior LED lighting
- Expandable dining table with seating for up to eight
- Transforming console/dining table with seating for up to 10



Photos by Carl Cox, courtesy Resource Furniture

Smart Home Network

- Security camera
- Motion detectors
- Lighting control
- Sound system
- Television controls

Special Features

- Raised-access flooring system with integrated porcelain tiles
- Low-pile, slip-resistant carpet tiles
- LED floor, table and wall lighting
- Composite windows with Low E glass

Walk-In Closet

- Motion-sensor, toe-kick lighting
- Integrated drawer and soffit lighting
- Motorized, pull-down closet rod (pictured below)
- Pocket door with integrated shoe rack, mirror, lighting and storage (pictured bottom)



Photo by Yassine El Mansouri



Photo by Carl Cox, courtesy Resource Furniture

Project Credits

ARIA COHOUSING COMMUNITY

Developers: Urban Ventures, LLC. **Owners Rep:** Colorado Urban Builders **Master Planner/Landscape Architect:** Wenk Associates **Architect:** Studio PBA **Original Architects:** John K. Monroe (original), John F. Connell/Roland M. Johnson (addition) **Engineer:** Entitlement and Engineering Solutions **Structural Engineer:** Mozer-Reen Structural Services **General Contractor:** Taylor Kohrs **Nonprofit Partners:** Cultivate Health, Partnership for a Healthier America

BAUMHAUS

Lessee/Client: Ollie **Property Owner:** Vitmore LLC **Design Architect:** Workshop/APD Architecture DPC **Architect of Record:** Stantec **MEP Engineer:** Stantec **Structural Consultant:** Atlantic Engineering Services **Civil Engineering and Parking:** Philip Habib & Associates **Landscape Architect:** Pashek Associates **Geotech:** R.A. Smith National, Inc. **General Contractor:** Vitmore LLC

CARMEL PLACE

Client: Monadnock Development **Property Owner:** NYC Department of Housing Preservation and Development **Architect of Record:** nARCHITECTS **Consulting Architect** (competition phase): Willis DeLaCour **MEP Engineer:** A. Joselow, P.C. **Structural Engineer:** DeNardis Engineering LLC **Civil Engineer and Landscape:** Langan Engineering **LEED Consultant:** Taitem Engineering, PC. **Code Consulting:** JM Zoning **Builders:** Monadnock Construction, Capsys Corp (modular units)

CHOY HOUSE

Architect of Record: O'Neill Rose Architects **Civil and Landscape:** O'Neill Rose Architects **Code Consulting:** O'Neill Rose Architects **MEP Engineer and General Contractor:** MC2 Properties **Structural Consultant and Expediting:** Basic Groups Corp Architectural & Engineering Services

COMMUNITY FIRST! VILLAGE

Lessee/Client: Mobile Loaves & Fishes **Property Owner:** Community First **Planning Consultant:** Liz Lambert

GRIPPI GARAGE ADU

Designer/Architect: Jack Barnes Architect, PC **Structural Consultant:** Pioneer Engineering **General Contractor:** Green Hammer

JOHN AND JILL KER CONWAY RESIDENCE

Developer: Community Solutions International, Inc. and McCormack Baron Salazar **Property Owner:** National Capitol Commons LLP, Be The Change Development Corporation **Architect of Record:** DLR Group | Sorg | Westlake Reed Leskosky **Original Architect:** Sorg Architects **MEP Engineer:** Allen & Shariff **Structural Consultant:** SK&A Structural Engineers **Civil and Landscape:** Christopher Consultants Ltd **General Contractor:** GCS-Sigal, LLC

LA CASA STUDENT HOUSING

Property Owner: The Resurrection Project **Designer and Architect of Record:** UrbanWorks, Ltd. **MEP Engineer:** HMS Engineering **Structural Engineer:** AES Services, Inc. **Electrical Engineer:** Avila Consulting Services, Inc. **General Contractor:** Denco Construction **Community Partner:** Local Initiatives Support Corporation (LISC Chicago)

LAS ABUELITAS FAMILY HOUSING

Property Owner: Primavera Foundation **Architect of Record:** Poster Frost Mirto, Inc. **MEP Engineer:** KC Mechanical; Monrad Engineering Inc. **Structural Consultant:** TLCP Structural **Civil Engineer:** JAS Engineering **General Contractor:** Lloyd Construction Co. **Community Partners:** City of South Tucson and Pima County, Arizona

MORAY ECO COTTAGE

Designer/Architect: Jack Barnes Architect, PC **Structural Consultant:** Willamette Building Solutions **Landscape Architect:** Owner-designed landscaping **General Contractor:** Design-Build Portland

ONE UNIVERSITY CRESCENT

Developer: Simon Fraser University Trust **Property Owner:** Millennium University Homes **Architect:** Perkins & Company **Architect of Record:** Lawrence Doyle Architect **Electrical Engineer:** Arnold Nemetz **Structural Consultant:** Glotman Simpson **Landscape Architect:** Durante Kreuk Ltd. **Code Consulting:** Pioneer Consultant **General Contractor:** Stuart Olsen Construction

OSLO

Developer: Ditto Residential **Property Owner:** 1734 6th Street LLC **Architect of Record:** DEP Designs **MEP Engineer:** OHI Engineering Group PLLC **Structural Engineer:** Linton Engineering, LLC **Civil Engineer:** CAS Engineering **Landscape Architect:** Lila Fendrick Landscape Architecture **General Contractor:** Ditto Residential

PACIFICA COHOUSING

Client: Pacifica Cohousing **Property Owner:** Pacifica Cohousing **Architect and Developer:** Giles Blunden **Designer:** Giles Blunden **Structural Engineer:** Charles Murphy **Landscape:** Joanna Massey Lelekacs and, later, residents **Civil Engineer:** Rob Joyner **General Contractor:** Resolute Construction **Lender:** Self Help Credit Union

PANORAMIC RESIDENCES

Lessee/Client: California College of the Arts and San Francisco Conservatory of Music **Property Owner:** Panoramic Interests **Designer:** Workshop1 **Architect of Record:** Kwan Henmi **MEP Engineer:** CB Engineers **Structural Consultant:** DCI Engineers **Acoustics Engineer:** Charles M. Salter Associates **Lighting Engineer:** Alva **Civil Engineer:** Sandis **Landscape Architect:** Fletcher Studio **Code Consulting:** Preview Group **General Contractor:** Pankow

SHOTGUN CHAMELEON HOUSE

Designer: Zui Ng, ZDES Studio **Structural Engineer:** Vatanii Engineering **General Contractor:** Zui Ng, ZDES Studio

THE ALLEY FLAT INITIATIVE

Community Partners: Austin Community Design and Development Center, University of Texas Center for Sustainable Development, City of Austin, Guadalupe Neighborhood Development Corp.

THE ARCADE PROVIDENCE

Developer: Evan Granoff **Property Owner:** 130 Westminster Street Associates, LLC **Architect of Record:** Northeast Collaborative Architects **Original Architects:** Russell Warren and James Bucklin **Mechanical Engineer:** J. Madison Inc. **Electrical Engineer:** Creative Environment Corp. **Structural Consultant:** Structures Workshop Inc. **Code Consulting:** Hughes Associates **General Contractor:** Evan Granoff

THE SIX

Property Owner: Skid Row Housing Trust **Architect of Record:** Brooks + Scarpa Architects **MEP Engineer:** Innovative Engineering Group **Structural Consultant:** John Martin & Associates **Civil Engineer:** Barbara L. Hall **Landscape Architect:** Brooks + Scarpa, LandStudio 360 **General Contractor:** Golden Bear Construction **Specifications:** Phil Easton

WELIVE

Lessee/Client: WeWork **Property Owner:** Vornado/Charles E. Smith (now JBG Smith) **Designer:** AREXA Architects, PC **MEP Engineer:** GHT Limited **Structural Consultant:** SK&A Structural Engineers, PLLC **Acoustics and Lighting Engineer:** Arup **Civil and Landscape:** Bowman **Code Consulting:** AON/Jensen Hughes **Expediting:** RAMCO of Virginia **General Contractor:** Davis Construction

HOME TODAY, HOME TOMORROW DESIGN CHALLENGE HOUSE

Financial Partners: AARP, AARP Foundation, Home Matters, Wells Fargo Housing Foundation **Lead Competition Partner:** American Institute of Architects San Francisco **Program Partner:** The Home Depot Foundation **Local Partner:** United Housing, Inc. **Winning Design Team:** IBI Group-Gruzen Samton; Gabriel Espinoza, associate AIA and project lead for the competition; Carmen Velez, associate AIA, LEED Green associate; Timothy Gargiulo, associate AIA, LEED Green associate **Judges:** Gretchen Addi (IDEO); Richard Duncan (RL Mace Universal Design Institute); Rodney Harrell, Ph.D. (AARP Public Policy Institute); Matthias Hollwich (Hollwich Kushner); Lawrence Scarpa, (Brooks + Scarpa Architects); Dan Soliman (AARP Foundation); Allie Weiss (*Dwell*) Mary Wenzel (Wells Fargo & Co.)

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Making Room: Housing for a Changing America was organized by the National Building Museum and the Citizens Housing & Planning Council in partnership with Resource Furniture and Clei.



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Bathroom Hardware: Hansgrohe; Geberit

Closet Systems: Capitol Closet Design

Closet Hardware: Häfele America Co.

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Raised Flooring System: Newfloor

Rugs: FLOR

Smart Home Network and Components: Casaplex

Tile and Grout: Ceramics of Italy/ Caesar Ceramiche, Ceramica Vogue, Ergon, Gruppo Romani, MAPEI, Tagina

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Planning Ahead (of Their Time)

Looking Back

In December 1960, AARP founder Dr. Ethel Percy Andrus wrote to John F. Kennedy, then the president-elect, inviting him to visit the **House of Freedom**, a model home co-designed by AARP and built in downtown Washington, D.C.

The house, Andrus explained, was created “to provide a starting point for action by private industry and government agencies to solve the problem of adequate housing for our older citizens.”

The single-story, step-free home featured elements incorporating “the latest research in design,” including an open floor plan for easier mobility and a less-confining feel than most homes at the time.

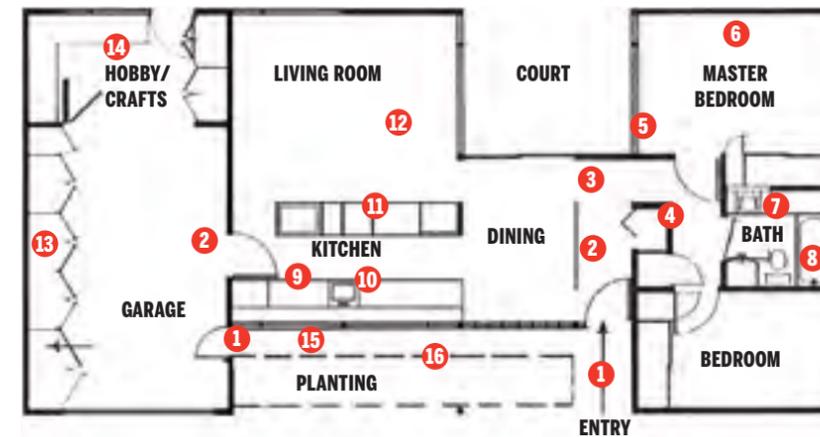
The housing administrators for both the outgoing Eisenhower White House and the incoming Kennedy team told the *Washington Post* they hoped the house would become widely available to “couples planning for retirement and younger families as well.”

While that wish didn’t come to pass, Andrus and AARP did succeed in both introducing the concept of universal design (see page 66) to the national stage and shining a light on the need for housing that can serve people of all ages and life stages.



On January 11, 1961, during the first-ever White House Conference on Aging, AARP founder Dr. Ethel Percy Andrus (pictured) presented President Dwight D. Eisenhower with a small-scale replica of the House of Freedom, described as a “model retirement home.” The design was suitable for single family units, row housing and garden court apartments.

White House and House of Freedom photos from AARP



House of Freedom Features

1. Zero-step entrances for safer access
2. Master light switches at entries
3. Nonskid floors throughout the home
4. Doors and hallway widths of at least 3-feet to allow passage by a person using a walker or wheelchair
5. Electrical outlets placed 18 inches above floor level for easy access
6. Master light switch in the master bedroom
7. Dressing seat next to the bathtub
8. Grab bars in the bathroom
9. Kitchen cabinetry within easy reach
10. Lower kitchen sink for washing dishes while seated
11. Pull-down light fixtures that make it easier to replace bulbs
12. Perimeter heat to keep the floors warm
13. Storage space in the garage
14. Hobby/crafts area in the garage
15. Outdoor water faucets placed at least 24 inches above ground to minimize the need for bending
16. Wide roof overhang to provide protection from rain



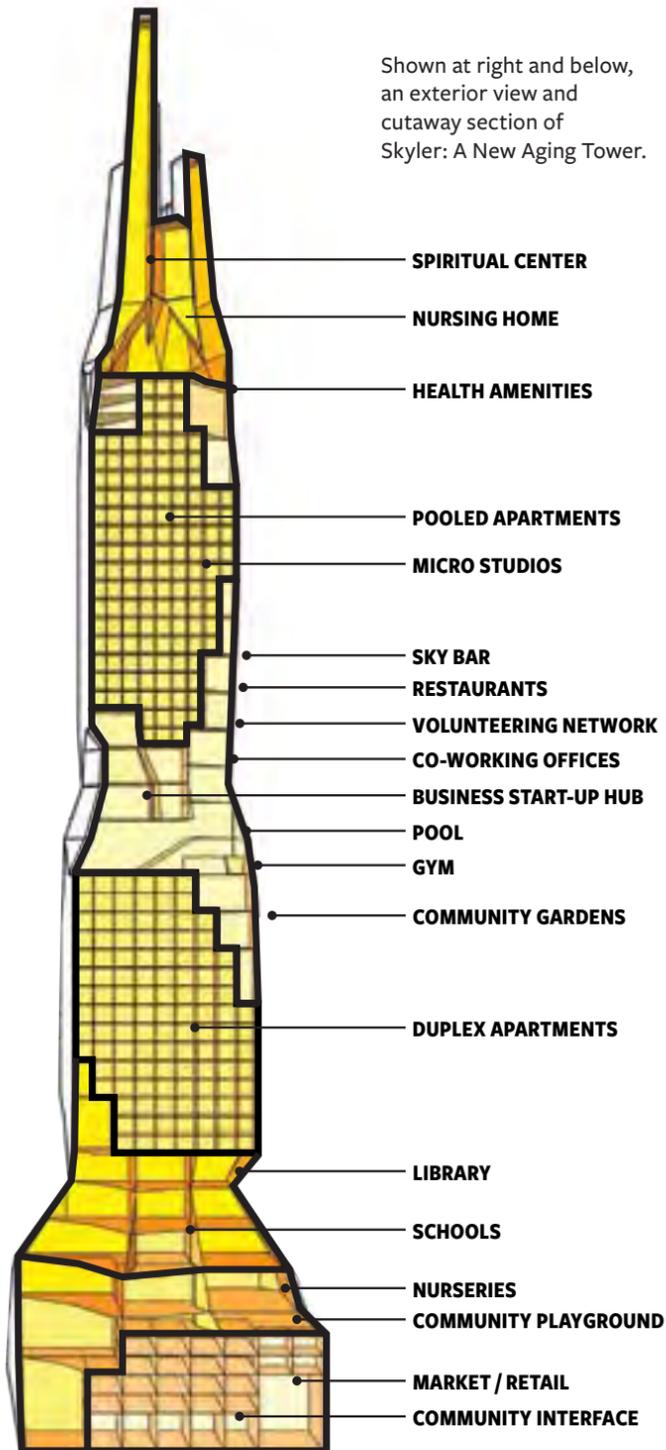
Clockwise from top left: The House of Freedom’s floor plan and its open kitchen and dining area. The model home (left) at the corner of M and 17th streets NW in Washington, D.C., was open for tours in 1961. Visit [AARP.org/MakingRoom](https://www.aarp.org/makingroom) to take a video tour of the House of Freedom.

*Floor plan and interior photos by APA–The Engineered Wood Association and AARP
Learn more about AARP’s founder by reading Ethel Percy Andrus: One Woman Who Changed America, AARP.org/AndrusBooks.*

Looking Forward



Shown at right and below, an exterior view and cutaway section of Skyer: A New Aging Tower.



Renderings and drawings courtesy Hollwich Kushner, New York, N.Y., HWKN.com

Creating housing that works for people of all ages requires outside-the-box thinking and a bold vision. That’s what architect and innovator Matthias Hollwich achieved with **Skyler**, a housing concept envisioned as a “New Aging Tower” that offers residents a home and community for all of life’s stages.

Combining apartments, social areas, childcare, work spaces, health care facilities and a spiritual center, Skyer is a “place where generations commingle, where the young can invigorate the old and the old can mentor the young,” Hollwich explains.

The imagined structure contains 600 residential units, including micro studios for millennials, duplexes that serve as single-family residences and co-living apartments that foster community. Amenities include laundry and grocery shopping services as well as shared transportation options.

The existence of supportive, aging-inclusive communities could reduce the frequency of older people moving to assisted living facilities and nursing homes since, Hollwich notes, many residents in such places “are there because of social deficits, not physical deficits. They are craving a sense of community.”

“It has been the easy solution to say, ‘Old people go here and young people go somewhere else,’” says Hollwich, who’s also the author of *New Aging: Live Smarter Now to Live Forever*. “That has been the architectural response to aging for the last hundred years.” But, he adds: “If you design for older people, you can create places that are good for everyone.”

“My son stays with me every other weekend, so I need flexible space for him.”

“I want to meet new people and experience the city.”

