

Designing for All Ages: Aging in Place & Intergenerational Homes

by Rachel Fawcett on May 12, 2026

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- The Pennsylvania Housing Research Center (PHRC) provides and facilitates education, training, innovation, research, and dissemination to the residential construction industry for the purpose of improving the quality and affordability of housing.
- Educational programs and publications by the PHRC address a wide range of topics relevant to the home building industry and are designed to reach a diverse audience: builders, code officials, remodelers, architects, developers, engineers, planners, landscape architects, local government officials, educators, etc. to provide professional development and continuing education.



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Description

Faced with the reality of Pennsylvania's aging population and cultural shifts in the makeup of households, this session will address best practices and considerations for new single-family construction to enable occupants to age in place and to accommodate intergenerational living. The session will also consider modifications that can be made to existing construction creating homes that support the needs of all ages. Participants will takeaway how to design and modify homes for all ages.

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Learning Objectives

1. Recognize location and site conditions conducive for thriving multigenerational households and the potential implications or limitations from zoning and policies.
2. Learn best practices to design for inclusivity as more than one in four adults in the United States have some type of disability affecting their cognition, mobility, independent living, hearing, vision, or self-care.
3. Discuss design considerations for space, flexibility, and accessibility to accommodate multigenerational households.
4. Understand retrofit modifications and associated challenges and expenses for remodelers and occupants.

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Overview

- Define key terms
- Understand the occupants for aging-in-place & intergenerational households
- Assess the current & future needs
- Learn about best practices to design for new construction
- Discuss modifications & challenges for retrofit applications

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Key Definitions

- Aging-in-Place / Age-Friendly Housing
- Intergenerational / Multigenerational Households
- Accessibility
- Visitability
- Universal Design

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Sources: <https://www.pewresearch.org/social-trends/2022/03/24/the-demographics-of-multi-generational-households/>, <https://universal-design.org/definition>, <https://pubmed.ncbi.nlm.nih.gov/10181147/>, <https://www.ada.gov/law-and-regs/design-standards/>, <https://ncjl.org/visitability/>



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Understanding Occupants

Aging Households & Multigenerational Households



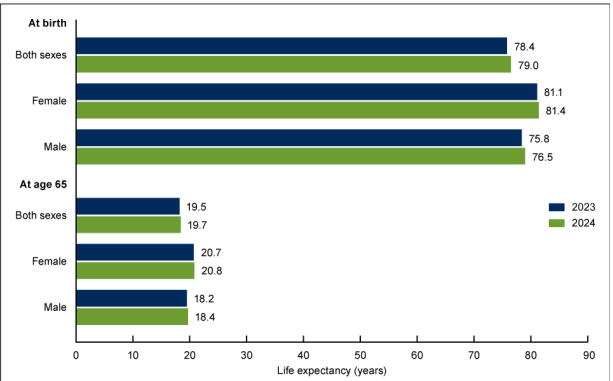
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Life Expectancy of U.S. Population


- **Increased life expectancy reasons:**
 - Healthier lifestyles
 - Specialized medicine
 - Increased technology
 - Focused care

Figure 1. Life expectancy at birth and age 65, by sex: United States, 2023 and 2024



Category	2023 (years)	2024 (years)
At birth		
Both sexes	78.4	79.0
Female	81.1	81.4
Male	75.8	76.5
At age 65		
Both sexes	19.5	19.7
Female	20.7	20.8
Male	18.2	18.4

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.



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Source: National Center for Health Statistics, <https://www.cdc.gov/nchs/products/databriefs/db548.htm>

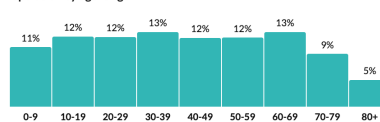
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Market Size of Generations

Age
41.2

Median age
a little higher than the figure in United States: 39.2

Population by age range



- **Nationally**
 - Average median age is 39.2
- **Pennsylvania**
 - Average median age is 41.2

Population by age range (Table B01001)

Column	Pennsylvania			United States		
0-9	10.5%	±0%	1,375,373 ±12,178.9	11.2%	±0%	38,171,789 ±65,551.1
10-19	12.4%	±0%	1,622,125 ±12,812	12.9%	±0%	43,795,927 ±74,576.4
20-29	12.3%	±0%	1,608,245 ±14,666.8	13.1%	±0%	44,556,506 ±87,853.1
30-39	13.2%	±0%	1,724,827 ±14,453.2	13.9%	±0%	47,130,310 ±77,012
40-49	12.2%	±0%	1,589,113 ±14,115.4	12.7%	±0%	43,049,230 ±77,820.4
50-59	12.2%	±0%	1,595,235 ±12,499	11.9%	±0%	40,433,480 ±62,878
60-69	13.2%	±0%	1,723,383 ±17,774.6	12.1%	±0%	41,085,348 ±89,787.8
70-79	9.3%	±0%	1,221,036 ±12,004.8	8.3%	±0%	28,190,749 ±66,301.7
80+	4.7%	±0%	619,414 ±9,093	4%	±0%	13,697,651 ±49,973.8

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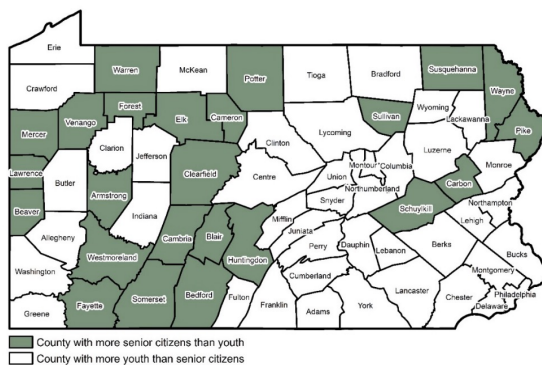
Image Source: Census Reporter, <https://censusreporter.org/profiles/04000US42-pennsylvania/>



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Pennsylvania's Aging Population

- “24 of Pennsylvania’s 67 counties have more senior citizens (65 years old and older) than youth (under 20 years old).”



Data source: 2020 Census, U.S. Census Bureau.

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Source: Center for Rural Pennsylvania, <https://rural.pa.gov/getfile.cfm?file=Resources/fact-sheets/Rural%20Aging%20Population%20July%202023.pdf&view=true>



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Why Aging in Place?

- **People want to remain in their current homes as long as possible.**
 - Including if they need long-term care.
- **People want accessible features they can age with.**
- **Our homes typically offer:**
 - Social attachments like neighbors, family, friends, etc.
 - Familiar physical environment
 - Lower costs than assisted care

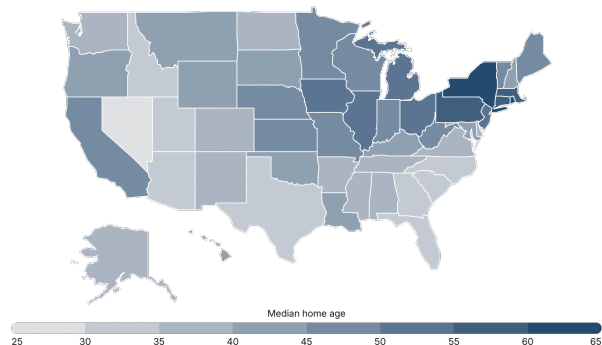
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Source: Northwestern Mutual, <https://news.northwesternmutual.com/planning-and-progress-study-2025>

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Pennsylvania's Aging Housing Stock

- **Median home age = 58**
- **Median year built = 1966**
- **66.3% of homes built before 1980**
- **7.3% of homes built after 2010**



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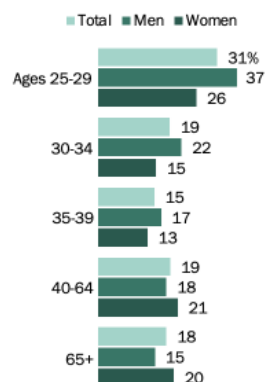
Source: Construction Coverage, <https://constructioncoverage.com/research/cities-with-the-oldest-homes>

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Defining Multigenerational Households

- For young adults (younger than 40), men more likely than women to live in a multigenerational household.

% of population in multigenerational households



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Source: Pew Research Center, <https://www.pewresearch.org/social-trends/2022/03/24/the-demographics-of-multigenerational-households/>



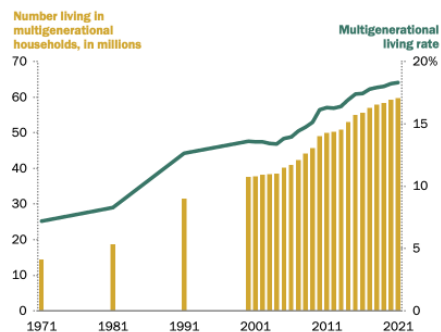
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Growth of Multigenerational Households

- Multigenerational households have been sharply increasing over the past 5 decades.
 - 18% of the U.S. population or 59.7 million people

U.S. population in multigenerational households quadrupled since 1971

Number and % of people who live in multigenerational households in U.S.



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Source: Pew Research Center, <https://www.pewresearch.org/social-trends/2022/03/24/financial-issues-top-the-list-of-reasons-u-s-adults-live-in-multigenerational-homes/>



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Why Multigenerational?

- It's practical.
 - Financial issues
 - Adult caregiving
 - Existing arrangement
 - Childcare
- It offers emotional benefits.
 - Convenient
 - Rewarding

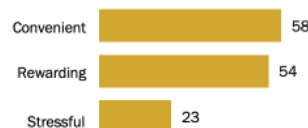
For many, multigenerational living has practical reasons and emotional results

Among adults in multigenerational households ...

% saying each of the following is a major reason why they live with adult family members*



% saying they find living with adult family members to be ___ all or most of the time



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Source: Pew Research Center, <https://www.pewresearch.org/social-trends/2022/03/24/financial-issues-top-the-list-of-reasons-u-s-adults-live-in-multigenerational-homes/>



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Assess Current & Future Needs

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Aging-in-Place Approaches

- Planning ahead for any future needs
- Preparing for upcoming needs due to progressive condition(s)
- Adapting for immediate, necessary changes



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Why Does This Matter?

- From Senator Bob Casey, “By 2030, one in five Americans will be over the age of 65, but...less than 5% of the national housing supply is accessible, with less than 1% of housing stock accessible to wheelchair users.”
 - About 26% of the U.S. population or around 61 million people have a disability.
- Approximately 70% of Americans live in single-family homes with no requirements to be accessible, visitable, or considering universal design.

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Source: *Laying the Foundation: Housing Accessibility and Affordability for Older Adults and People with Disabilities*, <https://www.aging.senate.gov/hearings/laying-the-foundation-housing-accessibility-and-affordability-for-older-adults-and-people-with-disabilities>; *Whole Building Design Guide*, <https://www.wbdg.org/fo/accessible/visitability>



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Occupant Needs in Numbers

- More than 1 in 4 adults (28.7%) in the U.S. have a disability
- 27.7% of adults in Pennsylvania have a disability
 - Cognitive, hearing, mobility, vision, self-care, independent living
- Disabilities can be temporary or permanent – surgery, injury, congenital disorders, etc.

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Sources: <https://www.cdc.gov/disability-and-health/articles-documents/disability-impacts-all-of-us-infographic.html>, <https://dohhs.cdc.gov>, <https://www.nlc.org/article/2024/07/25/housing-what-is-universal-design-and-why-does-it-matter/>



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Impacts the Full Human Lifecycle

- Life changes like the birth or adoption of a baby
- Caregiving whether for a child or adult
- People come in all shapes & sizes
- Be hospitable – welcoming all people into the home



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Mobility Considerations

- Canes, crutches, walkers
- Wheelchairs (manual & power)
- Scooters
- What about these may impact the design?



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Image Source: <https://www.pexels.com/photo/a-person-sitting-on-a-wheelchair-7698026/>



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Sensory Considerations

- Hearing
- Sight
- Smell
- Taste
- Touch



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Image Sources: <https://www.pexels.com/photo-of-people-sitting-on-wooden-bench-7188550/>, <https://www.pexels.com/photo/person-with-blue-bandage-on-his-injured-arm-7140013/>



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Other Impairments

- Memory loss – short-term, long-term
- Alertness – responsiveness
- Orientation – awareness of surroundings



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Image Source: <https://www.pexels.com/photo/a-pair-of-hands-of-people-holding-14346824/>



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Design Best Practice for New Construction

Learn about best practices to design for inclusivity of abilities and ages.

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Universal Design: 7 Principles

- Equitable use
- Flexibility in use
- Simple and intuitive use
- Perceptible information
- Tolerance for error
- Low physical effort
- Size and space for approach and use

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Sources: <https://www.nlc.org/article/2024/07/25/housing-what-is-universal-design-and-why-does-it-matter/>,
<https://universaldesign.ie/about-universal-design/the-7-principles>



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Design Strategies

- Space
- Flexibility
- Accessibility



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Design Opportunities

- Site Orientation
- Site Access
- Entrance
- Floor Plan
- Doors & Hallways
- Windows
- Flooring
- Lighting & Outlets
- Technology
- Bathroom(s)
- Kitchen
- Bedroom(s)

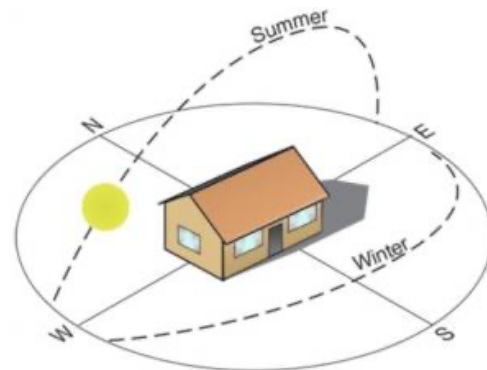
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Site Orientation

- Consider home's shape, climate, sun exposure, & shading
- Minimize E-W facing exposures to reduce glare
- Protect building entrances



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Image Source: <https://basc.pnnl.gov/building-science-measures/proper-solar-orientation>



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Site Access

- **Visible house number**
- **Driveways & Parking**
 - Flat surface
 - Near main entrance
 - Space to exit vehicle
- **Walkways**
 - Grade & ramps
 - Width
 - Surfaces – nonslip
 - Multi-sensory cues – texture, color, etc.



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Image Source: <https://www.houzz.com/photos/handicap-ramp-transitional-landscape-boston-phvw-vo-10811609>



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Entrance

- **Covered entry door**
- **Lighting**
- **At least one no-step or zero-step entrance**
- **Allow easy access**
 - Consider door hardware



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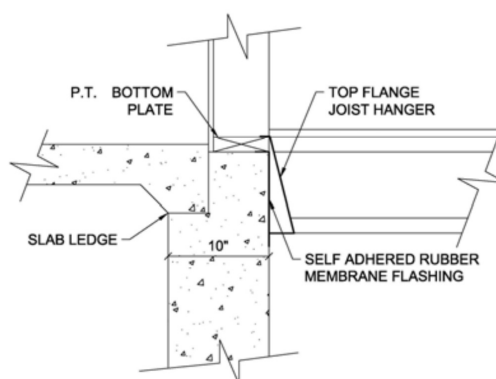
Image Sources: <https://www.pexels.com/photo/a-door-in-a-building-15445894/>; <https://www.rejuvenation.com/shop/hardware/exterior-door-sets-accessible-home-hardware/producttype-m-product-type-ff00090e192028fe202020-1/>



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Entrance: Construction Details

- Cribbing the floor system
- Hanging joist with top flange joist hangers
- Insulated Concrete Forms (ICF)
 - Drawing courtesy of Chris Hine
 - See his 2018 webinar on [Revisiting Visitability: Design & Constructability Issues](#)



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Image Source: Christopher Hine



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Floor Plan

- The floor with the accessible entrance should at least include:
 - 1 bathroom (ideally, full)
 - 1 bedroom
 - Kitchen
 - Laundry area



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Image Source: <https://www.aarp.org/livable-communities/housing/info-2015/lifelong-home-slideshow.html>

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Doors & Hallways

- Door width is recommended to be 36" (at least 32")
- Door hardware
- Think about the space around room entrances
 - Allow for adequate maneuvering space
- Hallways are finished at 42" to 48" width



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Image Source: <https://www.accessibilitychecker.org/blog/ada-requirements-for-doors/>



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Windows

- Window type
- Operating mechanisms
 - Within reach & accessible
 - Operated with the palm of one hand without grasping or twisting
 - Maximum five-pound pressure needed to operate sliders
- Sill height



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Image Source: <https://thekelsey.org/learn-center/design-standards/>, p. 159



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Flooring

- Use flooring changes to indicate transitions or alert to entrances & stairs
- Texture changes should be cane-detectable by individual with vision-related access needs
- Select colors for visibility
- Slip-resistant & fixed flooring



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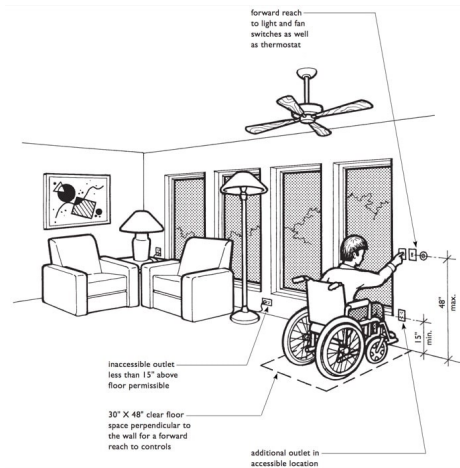
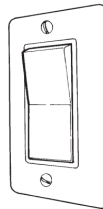
Source: <https://thehelsev.org/learn-center/design-standards/>, p. 185
 Image Source: <https://www.pexels.com/photo/photo-of-person-standing-in-front-of-doorway-7188955/>



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Lighting & Outlets

- **Light switches**
 - Height – 48” max.
 - Rocker-style
- **Types of lighting**
 - Layer lighting
 - Task lighting
- **Outlets**
 - 18” to 24” above the floor



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Image Source: <https://www.huduser.gov/publications/pdf/fairhousing/fairch5.pdf>



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Technology

- **Safety features**
 - Door alerts
 - Automated locking doors
 - Motion light sensors
- **Smart phone controlled**
 - Lighting
 - Thermostats
 - Appliances



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Image Source: <https://www.pexels.com/photo/smart-home-mockup-16859997/>

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Bathroom(s)

- **At least one accessible option on the visitable floor**
 - Has at least one toilet & one sink. Ideal is a full bathroom.
 - Can accommodate use of a mobility device.
- **Blocking preinstalled in wall cavities for future grab bars**
- Toilet / bidet
- Sink
- Shower / tub
- Flooring



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Image Sources: <https://www.pexels.com/photo/interior-of-bathroom-with-shower-19916734/>; <https://www.hamiltontile.ca/a-tile-guys-journey-blog/grab-bar-tile-shower>

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Kitchen

- **Layout & Work Surfaces**

- Consider how many people are using kitchen
- Navigation needs
- Prep needs

- **Appliances**

- **Cabinets**

- **Sink**



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Image Source: <https://www.aarp.org/livable-communities/housing/info-2015/lifelong-home-slideshow.html>



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Bedroom(s)

- **At least one on the visitable floor**
- **Maneuverability**
- **Closet design**
- **Furniture options**
- **Proximity to bathroom**



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Image Source: <https://www.pexels.com/photo/cozy-modern-bedroom-3144580/>



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Universal Design in the U.S.

- **San Antonio, TX**
 - [Ordinance](#) requiring new homes with city financial assistance to adhere to 7 Universal Design principles.
- **Vacaville, CA**
 - Through [Housing Element Program](#), city encourages all new residential units to be universally designed.
- [Goals of Universal Design handout from the Center for Inclusive Design and Environmental Access at the University of Buffalo](#)

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Sources: <https://www.nlc.org/article/2024/07/25/housing-what-is-universal-design-and-why-does-it-matter/>.

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Modifications & Challenges for Retrofits

Discuss modifications & challenges for retrofit applications

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Considerations

- **What are current needs?**
- **What are potential future needs?**
- **Awareness during retrofit:**
 - Occupants may be occupying the space.
 - What do occupants need access to?
 - Are there health concerns?

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Considerations Examples

- **Indoor air quality**
 - Minimize dust transfer
 - Portable air filters, divide space with plastic, etc.
 - Remove construction debris promptly
- **Physical accessibility**
 - Protective floor material
 - Alternative restroom



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Image Source: <https://www.pexels.com/photo/faceless-man-working-with-lamp-in-room-5691686/>



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Challenges

- **Financial barriers**
- **Site conditions**
 - Visitable entrance options
- **Existing home constraints**
 - Is there available square footage for modifications?
 - Is there blocking already in the walls?
 - How can a contractor access electric, plumbing, HVAC, etc.?

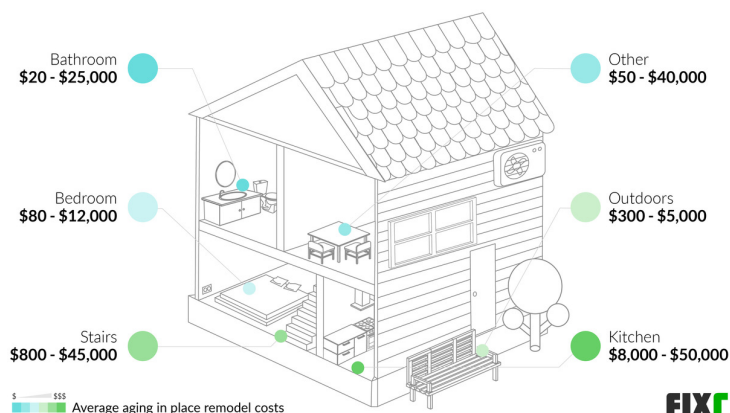
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Financial Barriers

- **National average = \$9,500**
- **Average range = \$3,000-15,000**
- **Minimum = \$350**
- **Maximum \$50,000**
- **Varies in scope & by location**



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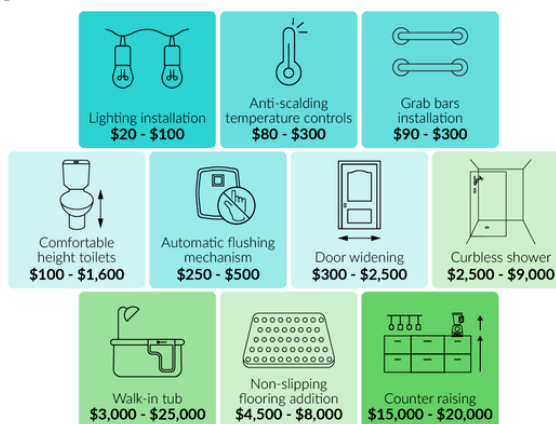
Source: <https://www.fixr.com/costs/aging-in-place-remodeling>



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Financial Awareness

- Modifications vary in cost.
- What is necessary?



Average aging in place bathroom remodel costs



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Source: <https://www.fixr.com/costs/aging-in-place-remodeling>

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Design Strategies

- Space
- Flexibility
- Accessibility



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Overall Modifications

- Wider doors & hallways
- No-step thresholds
- Lowered switches
- Higher outlets
- Easy-to-use hardware
 - Lever options
 - D-style drawer pulls
 - Rocker switches



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Image Source: <https://www.aarp.org/livable-communities/housing/info-2015/lifelong-home-slideshow.html>



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Kitchen

- Varied or adjustable counter heights
- Access to appliances
- Maneuverability
- Cabinets or shelving



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Image Source: <https://newmobility.com/building-an-accessible-home-to-fit-your-life/>



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Bathrooms

- Replace faucet for single-lever option
- Replace vanity for one with knee clearance
- Add grab bars (requires blocking)
- Add handheld, adjustable showerhead
- Add a bidet attachment to toilet
- Modify or replace tub / shower
- Replace flooring for a slip-resistant option



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Image Source: <https://www.usmedicalsupplies.com/BATH-ROLLAmer.html>



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How Will You Incorporate Aging-In-Place & Intergenerational Living Design Strategies?

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Benefits

- **Access** – meets people’s diverse needs & abilities
- **Financial** – boosts home value & saves on future renovations
- **Quality of Life** – supports independent living
- **Marketability** – broader appeal for outreach
- **Safety** – independence for various ages

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Source: City of Vacaville, <https://www.cityofvacaville.gov/government/community-development/planning-and-development/new-programs/universal-design>



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Summary

- Pennsylvania’s population & housing stock are aging.
- More than 1 in 4 Pennsylvanians have a disability.
- Multigenerational households are increasing.
- Design strategies for consideration include space, flexibility, & accessibility.
- Aging-in-Place & intergenerational living design strategies benefit all occupants.

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Additional Resources

- **Previous PHRC Webinars**
 - 2018 – [Revisiting Visitability: Design & Constructability Issues](#)
 - 2018 – [Future Proof Home Design](#)
 - 2015 – [Aging-in-Place - Business Strategies for Residential Construction](#)
- **Design Strategy Ideas**
 - [Inclusive Design Standards](#)
 - [Universal Design from AARP](#)
 - [Centre for Excellence in Universal Design](#)
 - [ADA Standards for Accessible Design](#)
- **Modification Ideas**
 - [Universal Bathroom Design Ideas from Better Homes & Gardens](#)
 - [Aging-In-Place Remodeling Information from Fixr](#)
 - [Home Accessibility Checklist from UDS](#)

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Questions?

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Thank you for attending!

Check out the PHRC YouTube Channel for more content.



<https://www.youtube.com/@PHRCPennState>


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