

# Universal Design & Green Home Survey Checklist

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We developed this checklist in conjunction with the Washington Court Housing Survey, a report on universal design and accessibility in affordable housing, [www.uiowa.edu/legalclinic](http://www.uiowa.edu/legalclinic). It is designed for use by consumers, architects, developers, realtors and other stakeholders interested in designing and building livable, energy-efficient homes and apartments that people of all ages and abilities can use, enjoy and adapt to suit their changing needs. Our goal is to promote independent living, safety, comfort, convenience and conservation of energy and natural resources. A few words, cautions, and disclaimers are in order.

Think Family: Try to anticipate the children and adults who might live, own, rent or visit the residence. People come in all shapes, sizes, and abilities -- tall, short, lean, hefty; so do our pets and service animals.

Think Ahead: Consider your current and future needs, resources, budget, and health.

Think Green: Be energy conscious when you design, build, and occupy the home. Conserve heat, water, electricity, and energy to reduce your utility bills and protect the environment. Recycle and reuse materials and buy local whenever possible. For ease of use, we have marked all of the Green Features with an asterisk \*

Do Not Think Disability, Wheelchairs or Ramps. But keep in mind that our lives -- and your family's lives -- could change in an instant without warning because of accident, injury or aging.

Do Not Think ADA, Fair Housing Act or Other Accessibility Guidelines. Most of these standards do not apply to private homes and address mobility and vision impairments primarily. They provide only minimum standards that too often do not reflect the real world needs of most people with and without disabilities.

Keep In Mind the Magic Numbers. Your home should at least meet the minimum dimensions in these accessibility codes: [www.hud.gov/offices/fheo/disabilities/accessibilityR.cfm](http://www.hud.gov/offices/fheo/disabilities/accessibilityR.cfm) and [www.access-board.gov/adaag/about/](http://www.access-board.gov/adaag/about/).

- 36 inches: width of an accessible route, path, sidewalk or hallway
- 32 inches: width of the interior opening for all doors (clear passage)
- 30 by 48: space needed for a standard wheelchair expressed in inches
- 60 by 60: maneuvering room needed for a standard wheelchair expressed in inches or 5 feet by 5 feet
- 28 to 34: finished tabletop or countertop heights for accessibility expressed in inches
- 27 to 29: knee clearance measured from finished floor to bottom of desk, table, etc. expressed in inches
- 15 to 48: minimum and maximum height for controls, outlets, shelves, items expressed in inches
- 1: 12: maximum slope of ramps expressed in a ratio (1 inch of rise per 12 inches in length)
- 1: 48: maximum slope of parking spaces, access aisles, etc. expressed in a ratio or a percentage (2%)

One Size Does Not Fit All: No two people are alike. We cook, bathe, socialize, study, play, learn, and live differently. This checklist is not intended to address how to modify or customize a home, room, or feature for a particular person's disability, special need, or functional limitation.

Think Beyond: This checklist is not intended to be comprehensive, and no single checklist or source can provide all of the information you need. Please refer to the checklists, websites, and other information in the Washington Court Housing Survey, [www.uiowa.edu/legalclinic](http://www.uiowa.edu/legalclinic), 19 *Journal of Affordable Housing* 191 (2010)

Using This Checklist: Take this checklist, a clipboard, a pen or pencil, and a tape measure with you around your home. Check all of the features and amenities present in each room. The checklist begins with the outside of the home, but you may start wherever you like.

## **Looking From The Outside In:**

- Gently-sloped, obstacle-free path from public transportation, sidewalks, parking or garage to step free entrances
- Movement-sensor/Motion-sensor lighting along walkway as well as additional exterior lighting \*
- Address numbers are easy to see from a distance and are illuminated or reflective for easy night visibility

## **Entryway**

- No-step entrances -- preferably at front, garage and other primary entrances
- Rails or supports at stepped entrances when needed
- Maneuvering space at each entrance:     five feet by five feet     six feet by six feet
- Nonslip surfaces on walk and driveways with ice and snow melt systems
- Covered entry or overhang to protect against weather
- Saturated lighting, ambient lighting and lighting focused on the front door and keyhole
- Shelf or bench for packages, keys and other items
- Mail slot or mail box is conveniently located, and is easy to reach and use for both letters and packages
- Doorbell is back-lit, easy to reach and has visual and audible cues
- Intercom system is hardwired to landline phone or linked to cell phone or other systems
- At least 18 inches of space at the latch side of the entry door

## **Entry Door(s)**

- Three foot wide (3'-0" or 36") door with low or no threshold
- Door with swing hinges provides at least 32 inches of clear passage space when open
- Power-assist door and touchplates to open the door
- Kickplate on the door extends 10 to 11 inches from the bottom
- Keyless or remote entry systems and security systems with visual and audible alarms
- Rough in and pre-wire door and entry for future installation of power door and touch plates \*

- Security wide angle peephole with a 132° - 200° viewing angle set at eye level or at 60 inches (standard), or multiple peepholes at various heights
- Sidelight security window that is full-length
- Keyhole is backlit
- Lever style door handle/hardware

## **General Interior**

- Open floor plan
- If another floor plan is used, the use of interior load bearing walls is limited to allow future renovations
- Locate the main kitchen, one bathroom, laundry and one bedroom (or space for a bed) on the ground floor or accessible floor
- Hallway Width:     42 inches     44 inches     46 inches
- Products and finishes are low maintenance and easy to clean
- Reinforced ceiling for future installation of lift with a 600 pound capacity

## **Doors**

- Door Width:         34 inches with 32 inch clear interior width         36 inches
- Lever style hardware
- Low- or no-threshold
- No more than 5 pounds of force is needed to open or close doors
- At least 18 inches of space at the latch side of door
- Different colors and textures mark transitions between door jambs and walls
- Pocket doors open and close with minimal force and have easy-to-use hardware

## **Flooring**

- Floors are smooth, durable, slip-resistant and non-glare
- Durable, low pile carpet (less than ½ inch thick), is low density and on top of a firm pad -- fragrance-free
- Different colors and textures mark transitions between surfaces and rooms
- Low to no Volatile Organic Compound (VOC) materials\*

## **Windows**

- Viewing window sills no higher than:     32 inches     30 inches     26 inches     23 inches
- Windows are lightweight and either:     Crank operated     Power operated
- Rough-in and pre-wire for remote-operated window

- Casement, awning, hopper or jalousie style windows, which can be easier to use, but should be checked for energy efficiency

## Hardware

- All interior door handles are lever style
- Handle pulls on drawers and cabinets are D or loop-shaped
- Touch latches are magnetic
- Power door push plates are located where needed

## Lighting and Electrical

- General, indirect and task specific lighting is fluorescent and Energy Star rated\*
- Light fixtures with electronic ballasts and linear or compact fluorescent bulbs placed to reduce glare\*
- Wall outlets at varied heights:  18 inches  20 inches  22 inches
- Telephone jacks at varied heights:  18 inches  20 inches  22 inches
- Rocker style light switches are easily reached, large, illuminated and mounted 39 to 44 inches above finished floor measured to the center of the switch
- Light switches are located at the entrance of each room and are within easy reach
- Thermostat has a large backlit digital display and is easy to operate with a large keypad
- Thermostat mounted above the finished floor:  40 inches  42 inches  43 inches  44 inches
- Vacancy sensor/automatic-off switches in laundry, bathrooms and closets for lights, fans, etc.\*
- Motion sensor lights in bathrooms\*
- Strategically placed photocell lighting between bedrooms and bathrooms for wayfinding\*
- Skylights and light tubes incorporate natural light\*

## Closets and Storage

- Half of all storage space located less than 48 inches above the finished floor
- Closet rods and shelves can be adjusted to different heights
- Shelving units that seated user can access and reach
- Electrical outlets in master bedroom closet and other closets for environmental and personal needs equipment\*
- Power operated clothing carousels in closets

## **Safety and Security**

- Smoke, Fire and Carbon monoxide alarms with visual and audible alarms are hard-wired with battery backup
- Security alarm with visual and audible alarms
- Movement-sensor lighting along walkway and additional exterior lighting
- Home is wired for security to alert police, fire and emergency responders
- Security/Intercom system allows monitoring of all systems from a TV, the internet, or handheld devices
- Wall mounted phone outlets in the bathroom, kitchen and laundry for convenience and safety
- Voice-activated, sound-activated, light-activated and motion-activated devices as needed
- CO<sub>2</sub> and other exhaust fans in the garage

## **Bedrooms**

- Saturated fluorescent and task lighting from varied sources with adjustable controls \*
- Ceiling fan/light combo units are Energy Star rated \*
- Ceiling fan/light combo units are operated by:  Remote control  Rocker style switch
- Closets with adjustable shelving and clothing rods at varied heights
- Fluorescent lighting in all walk-in closets with switch located just outside the closet doors \*
- Walk-in or roll-in closets
- Closet doors are at least 36 inches wide
- Clear space of at least 36 inches on two sides of the bed
- Clear space of 60 inches next to the closet
- Additional electrical outlets throughout the room and near the bed to accommodate medical or other equipment
- Telephone jacks, internet and other connections located near the bed
- Wall backing next to the bed and elsewhere \*
- Reinforced ceilings to allow future installation of lifts or devices with 600 pound capacity \*

## **Laundry and Utility Room**

- Laundry and utility room located on the main floor near the bathrooms and bedrooms
- Washer and dryer are front loaders with controls on the front; a top loading washer is acceptable
- Front loading washer and dryer are mounted 9 to 10 inches above the finished floor
- Controls and dispensers are easy to read, reach and operate
- When placed side to side, front loading washer is to the left and dryer is to the right for easy transfer of laundry

- Floor drain or drain pan under the washer
- Sink and some countertops are no more than 34 inches above finished floor with space underneath
- Space saving folding table
- Wheeled carts

## **Decks**

- Doors are easy to open, close and lock and provide a minimum of 32 inches for clear passage
- Low or no threshold between home interior and deck
- Sliding doors and screens should provide at least 32 inches of clear passage when opened completely
- Decking is slatted to allow for easy drainage

## **Stairways**

- Low-rise, wide stairs with high traction surfaces
- Stair treads:      8 inches deep      10 inches deep      12 inches deep
- Stair rise is between 7 and 8 inches high
- Stair treads do not stick out past the riser (unless required by code, then, use “cant strip” stair design)
- Stairway width:    42 inches    44 inches    46 inches    48 inches (for incline lift)
- Install stairway lift or rough-in, pre-wire and provide backing and support for future lift \*
- Install elevator or anticipate future installation by stacking two closets on top of one another \*
- Anti-slip strips on the front edge of steps with color contrasting materials

## **Driveways and Garages**

- Driveways and garages are flat on grade level with the accessible entrance level
- Power operated overhead doors
- Kickplate on garage door extends 10 to 11 inches from the bottom
- Eight feet high clearance or alternate on-site parking for tall vehicles
- Five to eight feet of space available between spaces for an accessible van and a car
- CO<sub>2</sub> exhaust fans and other ventilation \*
- Sensor lighting focused on the aisle or path between vehicles \*

## **Ramps (If you must have one)**

- No more than 1 inch of rise for every 14 inches of length or a 1:14 ratio; 1:16 preferred
- Landings are 5 feet by 5 feet at all entrances
- Integrated into the overall design and landscaping