



Universal  
Design  
Living  
Laboratory®



# **Universal Design Features by Room at the Universal Design Living Laboratory**

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The features listed here are all installed in the Universal Design Living Laboratory, the national demonstration home and garden in Columbus, OH. Awarded three certifications for universal design excellence, it is presently the top rated home for such attributes in North America.

Even though this demonstration home has an enhanced level of features and finishes, do not be discouraged, as universal design can be incorporated into any new home from production to luxury at very minimal cost. Even renovation projects that include UD features would benefit current and future homeowners.

Realize that a new or renovation project does not have to include all these features. Adapting even just a few of these features would be a step in the right direction.

### **How to use this report:**

A great way to benefit from this report is to let it be your companion as you tour the home virtually. Our project partner Google photographed all the rooms in the home. This immersive experience will help you solidify your awareness of universal design features.

The virtual tour is located at <http://www.udll.com/virtual-tour>

Please reach out to us if you have other questions at the email address listed below.

*Rosemarie Rossetti, Ph.D.*

*Mark Leder*



## The Entries

- Level thresholds at any door, no higher than ½”
- 36” wide doors with lever handles
- Lighting for safety and access
- Mail drop for easy access
- Porch shielded from the weather
- High visibility house address numbers
- 5' x 5' level maneuvering space (turning circle) on both sides of door
- Stepless, level grade at the entrance
- Sloped garage floor to the house entry with level threshold
- Use sloping walks, earth berms, retaining walls, bridges, or porches instead of obtrusive front ramps
- Package shelf or bench outside the door
- Full-length sidelight(s) and door class at entry door to see visitors

## The Kitchen

- Sufficient clear floor space for work/traffic flow; 5 foot turning radius
- Circulation routes 40" wide at a minimum at entryways to the kitchen
- No thresholds at any door
- 36" wide doors with lever handles
- Easy to roll on hard surface flooring
- Point of use storage
- Open/visible storage; flexible pantry storage
- Flexible base storage allowing for use as knee space
- Roll-out cart for storage
- Single lever faucets, mounted to the rear of a low profile sink
- Pot filler at cooktop
- Garbage disposer mounted in the rear of the sink allowing for knee space under the sink
- D-shaped handles rather than knobs on cabinets and drawers
- Counter tops at a variety of common heights: 30", 34", 35", and 40"
- Roll-out full extension shelves and drawers in lower cabinets
- Toe kick area at the base of lower cabinets: 9-10" high by 6" deep
- Glass doors on upper cabinets
- Vertical (pantry style) cabinet with pull out shelving for most used items
- Waste and recycling container on pull-out drawer in lower cabinet

## **The Kitchen** (continued)

- Side by side refrigerator/freezer (prefer 24" deep) w/ full extension shelves
- Side hinged doors on oven and microwave at counter height or lower
- Dishwasher elevated 16" above the floor
- Front-mounted controls on cooktop with easy to read print
- Knee space under sink and cooktop
- Pull out spice racks
- Electrical wall outlets 18" above the floor
- Electrical outlets and controls within reach Ex. Garbage disposer, range hood ventilation
- Varied light sources (LED and halogen)
- Under cabinet LED tape lighting
- Adjustable lighting controls with dimmer switches
- Light switches should have rocker switch, and be located within easy reach of user, (not on the back wall!) 42-48" off the floor

## **The Bathrooms**

- No threshold entries
- 36" wide pocket doors as a space saving alternative
- Circulation routes 40" wide at a minimum, to get to the bathroom
- Sufficient clear floor space for functional passage
- 5' turning radius in key areas
- Point of use, easily accessed storage

## **The Bathrooms** (continued)

- Multiple-height vanities with knee space under the sink
- Toe kick area at the base of lower cabinets: 9-10" high by 6" deep
- Increased use of support rails and grab bars in the toileting, shower and tub areas that compliment the aesthetics
- Walls reinforced with ¾" plywood and wood blocking behind wallboards where grab bars will be installed
- Heat in the floor and a towel warmer
- Anti-scald fittings on tub and shower
- Non-slip flooring
- Controls for lighting and fixtures that are easy to operate
- Full length mirror
- Vanity mirror at height for a seated person
- Curbless shower
- Channel shower drain
- Wall mounted shower chair and bench
- Towel bars at various heights for access by people who sit and those who stand
- Hand-held shower spray on a sliding vertical bar, with 60" long hose
- Water controls within reach of person seated in the shower
- Tub deck extended 15" for easier entry
- Tub with non-slip bottom
- Tub with built in grab bars
- Comfort-height toilets with seats 17-18" above the floor
- Toilet centered 18" from a side wall so grab bars can be within easy reach

## **The Bathrooms** (continued)

- Increased lighting from varied sources with adjustable controls
- Sufficient, well shielded lighting along either side of vanity mirror to eliminate shadows while grooming
- Moderate light level for wayfinding and orientation from bed to bathroom during the night
- Electrical outlets and controls within reach
- Lighted rocker switches, located within easy reach of user, (not on the back wall!) 42-48" off the floor
- Electrical wall outlets 18" above the floor

## **The Wardrobe/Laundry**

- Front-loading washer and dryer with front controls installed on a raised storage platform with drawers.
- Utility sink with knee space underneath
- Tall windows and a skylight provide natural lighting and ensure privacy
- Wall-mounted ironing board that adjusts in height for a person who is seated or standing
- Motion-activated lighting system
- Location of laundry appliances and clothing storage within same room increases efficiency
- Use of pocket doors to save space and allow for privacy
- Full length mirror
- Center island allows for accessible storage and a place to pack and unpack luggage and fold clothing
- Full extension drawers
- More than 50% of storage space is 54" or less from floor

## **The Bedrooms**

- Light switches are illuminated rocker switches
- Electrical outlets are located at a minimum of 20" above the floor from the top of box
- Carbon monoxide detector in all bedrooms
- Ceiling fan
- The hardwood floor is wheelchair friendly.
- 36" wide door which allows for 32" clearance
- Pocket door to save space and have the ability to keep light out of the bedroom if someone is in the bathroom
- Sound reducing property of all drywall in this room to keep this room quiet and keep out the street noise
- 36" of clear space around the sides and foot of the king size bed
- The adjustable frame king size bed is 27" high with a memory foam mattress and a massage unit
- The sheets have pockets on each side. Convenient to store remote controls, tissues, glasses, medications and ear plugs
- Casement windows with locks that are reachable from a seated position

## **The Landscape / Patio**

- A level covered patio with a concrete floor having ample room for a dining table, chairs, and a barbeque grill.
- Permeable pavers are ADA-compliant so that people are less likely to slip and fall when walking on them. They have a surface that is easy to roll on in a wheelchair, resulting in less vibration to the wheelchair user.



## **The Landscape / Patio** (continued)

- Raised garden beds that are accessible from a seated position.
- Plants are in large containers that are accessible from a seated position.
- A water hydrant is on the patio with light weight hoses attached.
- The retaining walls provide for seating and access to the planting bed.
- The fire pit is positioned with ample space for seating around it including space for large wheelchairs.
- The three foot wide paver pathway from the lower paver patio to the upper paver patio has a 1:20 slope making it easier for those using manual wheelchairs.
- Step free entrances, 36" wide doors, and low door thresholds at all access points from the home to the patio.



See the many resources listed at the Universal Design Living Laboratory website including: virtual tour, videos, articles, resource links, photos and more: <http://www.udll.com/>

Also, be sure to consider for purchase our comprehensive **Universal Design Toolkit**. It's the result of over 10 years of experience in researching, designing and building our home. We have lived in our home since May 2012. From practical hands-on experience, we KNOW what works.

The toolkit is useful for not only for consumers who are considering moving, building new or remodeling, but also professionals who want to expand their knowledge of universal design as they help their clients improve the quality of their lives.

Visit <http://www.universaldesigntoolkit.com> to learn more.

