



**SPECIAL NEEDS RESOURCE PROJECT**

*e-newsletter*

# Things to Think About!

## Universal Housing Design

### Part 2~Figuring It Out

By Linda Jorgensen



By Brandan Atkin

Below is an excellent source for finding information on housing:

Center For Universal Design  
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If there is anything that is not discussed in our newsletters and you would like to see it discussed, or you would like to be added to our newsletter mailing list, please contact us at [snrproject@hotmail.com](mailto:snrproject@hotmail.com)

Ron Mace, founder and director of the Center for Universal Design at North Carolina State University is credited with coining the term “Universal Design”. At the age of nine Mr. Mace contracted polio which resulted in his dependence upon a wheelchair for his mobility needs. An internationally recognized architect, product designer and educator he was passionate about changing the mindset of the general public and the concept of accessibility. He stated, “*Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.*”

Over time the concept has slowly begun to show up in the general housing industry with mixed results. Based on the 1990 Americans with Disabilities Act (ADA), the majority of readily available “universal” or “ADA accessible” house plans consist of small patio homes designed for retirees or empty nesters or “plug and play” home designs. Architects quite often design a home for general use but offer ADA standard options for a bathroom and kitchen. “Substitute ADA accessible bathroom B for bathroom A, add another foot in the kitchen, widen the front door and install a ramp and you’re good to go”. While this is a step in the right direction architects, builders and designers seem to have forgotten that people with physical disabilities don’t spend all their time in the bathroom or the kitchen. They want to be able to access the rest of the house as well.

Many professionals in the housing industry seem intimidated by the term and often shy away from building homes using universal design. Many families find themselves having to resort to custom designed homes, provided the cost is within the family budget, or remodeling a limited space in an existing home. Building a home using universal design concepts is not rocket science. It can be done using commonly found building products, plain old common sense and a bit of direction.

### Doing Your Homework ~ Recommended Reading

Universal Design (refer to Check It Out section to left) involves smart and creative planning, a little forethought, and research to create small changes that will result in a home where everyone could live comfortably for years.

Not quite sure what you need? We recommend the following reading for homeowners, prospective homeowners and all professionals interested in Universal Housing Design.

**Accessible Home Design Architectural**

Solutions for the Wheelchair User, Second Edition - Thomas D. Davies, Jr., AIA and Carol Peredo Lopez, AIA

Order at:

Paralyzed Veterans of America  
801 18th Street NW  
Washington, DC 20006-3517  
1-800-424-8200  
<http://www.pva.org>

**The Assist Guidebook to the Accessible Home**

Practical designs for Home Modifications and New Construction (2002 Edition) - Roger Borgenicht, Melissa Hoffman, Robert Matkin, Benjamin Shreiter

Order at:

Assist, Inc.  
218 East 500 South  
Salt Lake City, UT 84111  
(801) 355-7085  
(801) 355-7086 (Fax)  
<http://www.assistutah.org/index.html>  
\*Email:info@assistutah.org

\*Contact the organizations listed for ordering and pricing information.

**Figuring Out What You Need**

Since there is no existing legislation regarding single family dwellings it may be difficult to identify features you will need. If you've done your reading and are still unsure what you will require, an evaluation by a Rehabilitation specialist trained in housing accessibility will help you identify features that could be changed or upgraded. Take a good look at your current living space. What works for you? What doesn't, and why? What would you like to have in your home that you currently lack? Discussing these points with a trained evaluator will help identify the changes you'll need to make in your new space. Measuring actual turn radiuses, countertop heights for kitchen prep areas and bathroom sinks, and other areas in the home will be very important.

Whether you are renting, purchasing existing construction or building a new home from the ground up there are several specific features to be on the lookout for.

1. An easily accessible, safe, approach to the main entrance.  
A gently sloping sidewalk or ground level porch covered and out of the weather, is preferred.
2. A wide front doorway a minimum of 36 inches wide.  
Paddle/lever handles are easier to grasp and manipulate.

3. Interior doorways and hallways must be navigable.  
Interior doors should also be 36 inches wide whenever possible.
4. At least one bathroom must be accessible. A wheelchair turn space and room for a care assistant should be built into the room. Add a curb-less shower, handheld shower head and lower faucet controls for ease of use.
5. Kitchens should have the minimum required turn around space and accessible counter tops and cooking surfaces as required by the actual user. Lower cabinets and open shelving add to the accessibility of the space. A lower wall oven and a drawer dishwasher will also increase ease of use in the kitchen.
6. Bedrooms should have enough room for a bed, dresser and space for any equipment that may be needed by the individual. Allow room for a wheelchair or walker to be placed within reach from the bed. Install an intercom near the bed if needed to call for help during the night.
7. Light switches and plugs should be easy to reach for all occupants. Plug sockets should be raised to between 25-27 inches from the floor with light switches at 40 inches.
8. Minimize the number of transitions between types of flooring and the use of carpet. This will decrease the number of trip hazards in the home as well as the need to frequently replace costly carpet. If carpet is a must, stick with a low pile and use as little as possible.
9. Handles and faucets. Paddle, or lever, style handles are excellent replacements for door knobs. Simple pressure with a fist or an elbow will serve to open the door. Same for faucet handles in the kitchen and the bathroom. Drawer pulls should be "U" shaped to allow for a simple "hook" with stiff fingers.

Once you've developed a list you'll want to get it documented. If you are applying for assistance programs for new construction or updating your current home, an evaluation is an absolute must. A letter of evaluation containing an assessment of your current housing situation, a list of limitations and pit falls, recommended changes and upgrades for remodeling or new housing is essential when applying for building assistance programs. This letter of recommendations will be the foundation for finding a skilled contractor to assist you in remodeling or building new housing. Your physician may also use this letter as a reference when writing prescriptions for equipment ordered through a medical equipment company, which may be paid for by your insurance company or state funding programs, if you are eligible. Once you know what you need, you can begin to look at your options.

Regardless of ability everyone will feel comfortable when you apply Universal Design principles at home.