

# Universal Design

A COMMITMENT TO ACCOMMODATE ALL

BY JENNY S. REBHOLZ, ALLIED MEMBER ASID

Pat Rowen, ASID, CAPS, has a poster in her office that shows a baby crawling, a little boy playing, a teenager on crutches, a businessman with groceries, an elderly person in a walker and a person in a wheelchair. It reminds her to think of all the stages of life. Universal design is a responsibility Rowen takes seriously, and she believes that she has the power to make life better for all of her clients no matter their stage of life.

A practicing designer for almost 20 years, Rowen has come to realize how many people need help with accessibility-related issues – a trend becoming more evident with the aging of the baby boomer generation. More and more, people want to live a happy, healthy life in the home that means something to them and their family. By applying universal design principles, every family member – regardless of age, size, ability or health – can enjoy the environment.

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Rowen has met the requirements to qualify as a Certified Aging-In-Place Specialist through the CAPS program – developed by the National Association of Home Builders Remodelers Council in collaboration with AARP, the NAHB Research Center and the NAHB Seniors Council – which trains professionals how to successfully work with older and maturing adults on aging-in-place remodeling projects. “The program gives you exposure to the topic and what to pay attention to,” describes Rowen. “They get you out of the building doing things in order to make you aware of the issues and how someone with a disability would live.”

## A Perfect Opportunity

People in every part of the country can benefit from good design, and Rowen is showing the residents of Hillsdale, Mich., a town of about 8,500 residents, that good design can contribute to a lifetime of hap-

piness in a home. “We are an hour from any major city, and the market is middle income or lower. The homes in this town were built between approximately 1850 and 1960; everything here needs to be remodeled,” says Rowen.

John and Mary Anne MacRitchie lived a distance from town in a house that had become too big for their lifestyle needs and wasn't properly designed for their physical needs as they aged. They had their eyes on a smaller 1927 home just blocks from town and asked Rowen to take a look at the new property.

“Leaving the home where we raised our children was a tough decision, but it needed to be made. We don't need a two-story home with all that space and required maintenance,” comments John MacRitchie.

The challenge of renovating the new home was to work with the relatively small existing space and still provide all the necessary universal



design elements. To meet the budget requirements, Rowen needed to stay within the space, maximizing the layout to accommodate all the couple's needs on the main floor, which is only 1,033 square feet. To address so many uses in such a small space, prioritizing is essential. Rowen focused first on making sure the traffic patterns provided plenty of space for a wheelchair or walker, should the need arise. She then examined storage issues and adjustments that would help make the functions of the home easier.

"There were a lot of design elements that they did not know about, but they were open to suggestions," says Rowen of her clients. "As I worked through the plan, I would walk them through the ideas." This partnership proved successful for both parties. "Pat consults with her clients to understand what they want and designs a space that suits their needs," comments Mary Anne Ritchie. "She educated

**Sinks throughout the home, including the master bath, use a single central faucet located on the side for ease of use.**



us about aging in place and what could be done with our space.”

The total remodel, including labor and materials, was accomplished with an \$80,000 budget, and the work was completed within three months, before the MacRitchies moved in.

### The General Conditions

Rowen’s plans for the first floor included a living and dining area, kitchen, powder room and master suite, so the couple would not need to maneuver up and down stairs for their daily needs. A bedroom and bathroom suite occupies the second level to accommodate guests or to serve as future space for a caregiver.

Plumbing, electrical and HVAC components were brought up to current building code standards, and smoke detectors were installed. Rowen installed motion sensors on the front and back porches for added security and safety, along with lighted rocker switches throughout the home and a lighted doorbell for ease of use. Conveniences such as three-foot doors with lever handles and new electrical outlets installed at least 27 inches above the floor support ease of motion and reduce the need for residents to bend down.

Throughout the project, care was taken to maintain respect for the historical significance of the 1920s home. Recessed panel doors were installed to reflect the original design, and items such as crystal doorknobs – which did not meet the accessibility standards required for the main floor – were moved to the second level to preserve the home’s historic authenticity.



### The Kitchen

Rowen made numerous improvements to the kitchen, maximizing the small space while minimizing the need for bending, reaching or any type of physical strain. Rowen moved away from the original layout – which focused on one wall for storage, counter space and sink access – and created a U-shape design with appliances spaced for ease of motion and operation.

The dishwasher was raised off the floor, range controls were positioned at the front of the appliance and easy-to-open cabinet hardware and

**Universal design considerations in the kitchen include a raised dishwasher and cabinetry with roll-out shelving.**



roll-out shelves were incorporated throughout. A microwave was installed at eye-level with a breadboard placed below as a landing space for hot items. A smooth top electric range was selected with downdraft ventilation to pull heat from the surface, and a GFCI circuit was located in the kitchen for safety as required by code. A smooth, solid surface countertop allows for easy repairs, and an integrated drain board and cutting areas provide added cooking conveniences. The sink offers a pull-out spray and a soap dispenser.

### The Powder Room

Despite its small size and infrequent usage, even the accessibility of the powder room was given attention. Rowen installed a 36-inch height vanity to minimize bending, with an easy-reach single control faucet located on the side of the sink. A three-foot wide doorway allows for easy entry into the small space, which also features a comfort-height toilet with grab bars and a slide-on toilet paper dispenser.

### The Master Suite

A private entrance to the master suite was created adjacent to the powder room, with a clear transition from one area to the next. The bedroom area was enlarged to accommodate a king-size bed while still allowing three-foot clearance on either side. Special features of the room include an in-wall ironing board, lighted closets with bi-fold doors, lighted switches and additional outlets at each nightstand. The bedroom was also pre-wired for a mechanical door closer, should the need arise in the future. Addition-

ally, the room's level-loop carpeting is a contrasting color from the bathroom floor, to create a safe, noticeable transition from room to room.

The design of the master bath includes a 60-inch shower with a bench seat, a 36-inch high vanity, a comfort height toilet and a front load washer and dryer stacked and raised with shut-off controls near the door opening. Reaching and bending considerations were addressed in the shower areas through valve, shower head and soap storage locations. A lower threshold was also designed. Non-slip and non-glare vinyl flooring as well as smooth cultured marble shower surfaces allow for easy maintenance. Increased lighting and ventilation, including a light in the shower, was addressed. Grab bars in the toilet area and a single control faucet at the side of the sink round out the accessibility features of this room. Linen and vacuum storage was also provided for within the master bath due to limited storage space throughout the home.

### Product Highlights

Rowen utilized a variety of products at varying price points to complete this project. Time and again she specifies products from Kohler and Moen, both Industry partners of ASID, due to their style options and high quality. "They offer a great range of styles, especially considering the range of architectural periods I am trying to complement in my clients' homes," explains Rowen. "Despite the longer lead time, the style, quality and dependability is important to me." (See the resource guide on page 39 for a complete list of the products used.)



**The home's powder room includes accessible features such as a 36-inch height vanity to minimize bending and a three-foot wide doorway.**



**The master suite includes a bedroom, storage areas and the master bath with shower and laundry area.**



Rowen selects cultured marble as a material of choice in her bathroom designs, largely for its versatility. Available in sheets, the marble can fit to accommodate any shape or size shower, an important benefit when working with the constraints of historic homes. Another of Rowen's "go-to" products is EOS solid surface material, used for kitchen counter applications. It is three-centimeters thick, which means lower fabrication costs – somewhere between the cost of laminate and granite – and has a smooth, seamless surface ideal for integrated bowls, drain boards and cutting areas.

### **If I Could Change One Thing ...**

In every project there are always constraints that prevent designers from achieving the ideal design. The MacRitchie's budget did not allow for major structural change, such as moving load-bearing walls – nor was this necessary to achieve the primary accessibility goals of the renovation. "If I could have moved a wall, I would have," describes Rowen, who would have liked more space in the bedroom for additional clearance around the bed, as well as turn-around space in the master suite toilet and a roll-in shower application.

Still, no matter the restrictions, Rowen provided the highest level of accessibility and conveniences possible and even considered future needs, while always keeping the owners' preferences at the forefront. "I love the house . . . and it will work well as we get older and if we do need a walker or wheelchair," comments Mary Anne MacRitchie. "We love what Pat did for us and her advice was terrific."

### **Educating by Example**

The MacRitchie's home renovation afforded Rowen – who partnered with Rob Glass, CAPS, of Glass Construction, on the project – the opportunity to not only improve the couple's lifestyle, but to educate the community on the benefits of universal design as well. "I see it as serving my community rather than just designing for profit," says Rowen. I am providing a service that I think everyone should be able to afford. It is my personal commitment."

The MacRitchies opened their home as a showcase house so that neighbors and friends could imagine the possibilities for their own homes. Visitors toured the home prior to construction and were then invited back after the work was complete.

"It was really amazing. People were at the door when we opened and didn't stop coming for two days," describes Rowen.

Glass also recognizes the impact this project had on the community: "Based on the showcase house, I am getting approached by so many people. We established some awareness, and now they want to be better educated," he explains. ▫

*Jenny S. Rebholz, Allied Member ASID, is an interior designer and journalist with a passion for writing about great design and educating the public on design issues and trends*

# Resource Guide

## Kitchen

- **Appliances**  
JennAir – smooth top range with slide in downdraft (JES9800AAW)  
Whirlpool – dishwasher (DW1100XTPQ)
- **Plumbing Fixtures**  
Moen, Industry Partner of ASID – Colonnade, single control, pull out spray, chrome faucet  
Moen – liquid dispenser (3913)
- **Cabinets**  
Fieldstone Cabinetry, Hudson door style, cherry
- **Cabinet Hardware**  
Knobgallery.com, Berenson, brushed nickel knob (29201) and handle (29301)
- **Counter**  
EOS solid surface counter with drainboard and sink (color: Hattaras)
- **Flooring**  
Congoleum Pacesetter (60125)
- **Paint**  
Benjamin Moore, Industry Partner of ASID – walls 1095: ceiling, doors and trim, OC 29
- **Accessories**  
Maribeth's, Hillsdale, Mich.

## Living Room/ Dining Room

- **Fireplace Façade**  
Custom woodwork by Rowen Design
- **Paint**  
Benjamin Moore – walls 1095; ceiling, doors, trim, fireplace façade, OC 29
- **Accessories**  
Maribeth's, Hillsdale, Mich.

## Master Bathroom

- **Appliances**  
Whirlpool – stackable washer (LHWO050PQ) and dryer (LEWO050P)
- **Plumbing Fixtures**  
Kohler, Industry Partner of ASID – Caxton under-mount china lavatory bowl, white  
Kohler – Leighton, comfort height toilet with Cachet slow-close seat, white  
Moen – Kingsley single control lavatory faucet, chrome  
Moen – Viletta hand held shower with bracket  
Moen – Kingsley posi-temp shower valves and trim
- **Cabinets**  
Fieldstone Cabinetry, Hudson door style, cherry
- **Cabinet Hardware**  
Knobgallery.com, Berenson satin nickel knob (29201) and handle (29301)
- **Counter**  
Cultured Marble, Al-Co Products, satin finish
- **Shower**  
Cultured Marble, Al-Co Products, custom shower pan, walls, seat and trim, satin finish
- **Flooring**  
Congoleum Pacesetter (60125)
- **Paint**  
Benjamin Moore – walls HC 140; ceiling, trim, doors OC 29
- **Accessories**  
Maribeth's, Hillsdale, Mich.
- **Grab Bars**  
Grabbarspecialists.com, straight, white powder coat
- **Towel Bars**  
Potterybarn.com, Mercer towel bars, hook

## Master Bedroom

- **Flooring**  
Mohawk – Northshore 832, Vanilla
- **Paint**  
Benjamin Moore – walls HC 140; ceiling, trim, doors OC29
- **Accessories**  
Maribeth's, Hillsdale, Mich.

## Powder Room

- **Plumbing Fixtures**  
Kohler – Leighton comfort height toilet with Cachet slow-close seat, white  
Moen – Kingsley single control lavatory faucet, chrome
- **Cabinets**  
Fieldstone Cabinetry, Hudson door style, cherry
- **Cabinet Hardware**  
Knobgallery.com, Berenson satin nickel knob (29201) and handle (29301)
- **Counter**  
Cultured Marble, Al-Co Products, vanity top with integral sink, satin finish
- **Flooring**  
Congoleum Pacesetter 60125
- **Paint**  
Benjamin Moore, walls 1095, ceiling, doors, trim, OC 29  
Towel Ring  
Potterybarn.com, Mercer towel ring and wall vase
- **Grab Bars**  
Grabbarspecialists.com, straight, white powder coat
- **Wallpaper**  
Bradbury and Bradbury Art Wallpapers, Adelphi Frieze, Pompeiian colorway
- **Accessories**  
Maribeth's, Hillsdale, MI

## Aging in Place Resources

- **www.aarp.org**  
Aging in place information
- **www.asid.org**  
Aging in place literature, CEUs
- **www.best-bath.com**  
Remodel showers, reinforced for grab bars, many sizes available, low or no threshold
- **www.design.ncsu.edu.cud/**  
North Carolina State University, Center for Universal Design information and education courses
- **www.grabbarspecialists.com**  
Grab bars in many sizes and colors readily available
- **www.nahb.org**  
National Association of Home Builders provides the Certified Aging-in-Place (CAPS) Certification course
- **www.nahb.org/designations** or **capsinfo@nahb.org**  
CAPS information
- **www.naipc.org**  
National Aging-in-Place Council
- **www.nkba.org**  
National Kitchen and Bath Association, kitchen and bath courses, CEUs and universal design education
- **Rowen Design**  
(517) 439-2416  
1488 Vera Dr.  
Hillsdale, MI 49242  
www.rowendesign.com
- **Glass Construction**  
(517) 437-3754