

around the HOUSE

A Home That Makes House Calls (Part 2)

Last month we looked at a broad definition of Universal Design (UD) in housing and began to explore optimum approaches for space planning in newly built homes. I wrote that an open plan works well for a new UD home and noted we would further discuss this and other interior design issues in this month's column.

Easy Access

An open plan makes it easier for wheelchair users and people who use sign language as a form of communication. It is advantageous to be able to see people within the common areas of your home. Communication is made easier without having to move around corners while constantly navigating doors. For wheelchair users it also has the practical advantage of not bumping into walls and scratching the door casings because they are not turning around as much.

An open plan can also be beneficial for people who are elderly and wish to not move around a lot but want to be included in general activities and easily approached. I want to be careful, however, not to imply that open plans are the only ones that will work for UD homes. An existing-home remodel can also have room separation walls "opened up" and doors widened with appropriate structural analysis. But it is much more expensive to provide home modifications within an existing structure than to include UD throughout in the first place. In most cases such as an existing home, a combination of home modifications and a full home addition may make more financial sense. I will discuss UD remodel strategies another time.

Open plans have advantages, but they also pose significant design challenges. Defining room functions, differing



This home's "open" floor plan allows you to see from the entry foyer into the piano area (left) and the eating area and serving bar.

floor materials and surface transitions, furniture arrangements, cross-area acoustics, colors, and circulation patterns are all aspects of the interior that must be considered. These aspects are just a few of the design parameters that would also include natural and artificial lighting, windows, and more. This article discusses a couple of these features; others must wait for future articles due to space limits.

Flooring

Differing floor surfaces combined with varying

ceiling heights are a fun and effective way to define various functional areas in an open floor plan. Many people, especially older individuals, take cues from the floor.

Differences in texture are important for locomotion and depth perception. Floor coverings for main circulation patterns through the home should be hard-surfaced materials such as ceramic tile, impreg-



Flush floor-material transitions are critical for easy rolling access in every home.

nated wood, rubber, and solid vinyl floor coverings to name a few. These should all have a nonskid, matte finish for minimum glare.

According to the Americans with Disabilities Act (ADA), a nonskid surface must have a coefficient of friction no less than 0.6 (0.8 for ramps), whether wet or dry. A rubber floor often exceeds this specification and can be a good selection. The joints of a rubber floor can also be seamlessly welded, and rubber floors also cushion falls. Although I mentioned ADA earlier, and it is a good base reference, it does not legally apply to private housing. These finishes are easily used with wheelchairs, scooters, walkers with wheels, and rolling carts.

For people with allergies, adhesives and leveling compounds should be avoided if possible. At the very least, make sure all sub-flooring materials are free of volatile organic compounds (VOCs).

Deep joints wider than $\frac{3}{4}$ " may cause wheelchair wheels to turn or hold them up, so joints should be $\frac{1}{4}$ – $\frac{1}{2}$ " wide and of minimum depth. I like to specify tile on the diagonal, making it easier to navigate any device with wheels. This also creates visual interest and adds an additional tolerance level for the tile setter, as few people would notice a nonperfect diagonal as much as they would a square pattern.

Floors with a high percentage of vinyl resin are most resistant to stains, while rubber and solid vinyl floors are the most resilient and dent resistant.

Floor coverings' colors should contrast with the wall color to highlight the



From the rear garage entry, you can quickly access the kitchen to the left and have visual access to the dining area and through the fish tank to the kitchen to the bar.

room's edges. It is also a good idea to contrast the floor with the furniture finishes. This can prevent falls and collisions for people with low vision while sitting or moving through a room. Avoid high-contrast patterns in all floor coverings that can make small objects on the surface difficult to locate, especially for those with limited vision.

Carpeting with strong patterns or too strong color contrasts within the pattern may be visually confusing for elderly people and lead to misjudgments of spatial distance. Light-colored carpeting increases light quality throughout the spaces without increasing glare. Carpet also reduces the incidents of falls and cushions them if they

do occur. A pile $\frac{1}{4}$ – $\frac{1}{2}$ " high should be a high-density commercial grade. Carpet of this height is also best for wheelchair use and offers less resistance for all rolling traffic. A carpet surface that is too soft is easy to sink into and may cause loss of balance.

A sense of touch is sometimes substituted when other senses decline. Carpet generally feels warmer. Textural cues like carpet and fabric are stimulating and can signal spatial changes in an open floor plan from one area to the other. Antimicrobial carpeting such as Dupont Antron or Interface Flooring Systems can inhibit bacteria and is waterproof. These are most often used in healthcare settings.

Furniture

Furniture should be placed so as to allow access to each piece of furniture, storage, windows, and appliances. Ideally there should be three feet *around* each piece and a clear circulation path of three to four feet *through* each space. Floor outlets should never be across any floor surface. I specify in-floor outlets for central living areas. A person may be limited in hearing or sight, so seating should be arranged at right angles to each other and about three feet apart.

In a typical furniture layout, the coffee table height is 12–14", but a higher table, one that is roughly 24", reduces the possibility of people tripping over the table while lessening the amount of bending.

The easy access entertainment bar has views behind, through a fish tank to the kitchen, in front to the piano area and foyer, and to the TV/great room at the left.

UD spatial planning involves many other considerations I will discuss in future columns.

The home plan book *Universal Design Smart Homes for the 21st Century* is available at a \$5 discount at my website, www.UniversalSmartHomes.com. Use the promo code Vethomes. The book has 25 pages of room-by-room benefits that will pick up where this article ends. It also includes 102 home plans for new homes and remodels.

Thank goodness spring is just around



the corner, so next month the subject is UD outdoor activities and gardening. Until then, be safe—and stay warm!

Contact: CharlesSchwab@UniversalDesignOnline.com. ■

Attorney Ronald R. Gilbert

Who's Who in American Law
1985 through present

Attorney for the Spinal Cord Injured

if you, a friend or loved one, has been injured by: (1) A product or use of a product (e.g. helmet, vehicle even if it is a one-vehicle accident and you are the driver, ladder, trampoline *more*), (2) On someone else's property (e.g. falls, gunshot, recreation or athletic events *more*), (3) During a medical procedure or as a result of a prescription drug — **YOU MAY BE ENTITLED TO ECONOMIC RECOVERY.**

Put the nation's top personal injury specialist to work for you. Ron Gilbert has helped over 300 spinal cord injured persons in 35 states collect the compensation they deserve. If you have suffered a spinal cord injury, he will try to help you.

Compensation from successful and responsible litigation can open doors to a better life.

Some of Ron Gilbert's many efforts to help the spinal cord community include:

- Helped sponsor legislation benefitting spinal cord injured persons.
- Served as Secretary and member of the Board of Directors of the National Spinal Cord Injury Foundation.
- Received a Certificate of Appreciation for Prevention work from Michigan PVA.

Time may be working against you. A rule of law called the Statute of Limitations puts a time limit in which you may file an injury claim. This time can be as short as one year. If you have been seriously injured, time may be running out. Don't wait. There is no cost to talk to Ron.

For help, call Ron Gilbert today for a free review of your legal options. He'll provide legal help as well as assistance in planning, and coping with the physical, emotional and other challenges you face.

**Cases Handled
Personally Nationwide**

1-800-342-0330
Ronald R. Gilbert, P.C.
www.fscip.org / ron@fscip.org
www.aquaticisf.org
rrgpc@aol.com

If you have suffered a spinal cord injury, call today to receive a free legal consultation and complimentary copy of Spinal Network and a handbook on legal options for victims of spinal cord injuries.



OPTIONS FOR VICTIMS OF SPINAL CORD INJURIES

- Financing The Future: Managing Disability-Related Expenses
- Liability, Compensation And Your Rights
- Legal Options
- Improving Safety Through Legal Action
- Finding And Choosing An Attorney
- Getting Help: A Guide To Organizations
- For Details, Go To Ron's Website — www.fscip.org For Legal Options And Professional Help.