

 **DVD Excerpt:**

The [Design Factors](#) video (WMV format [03:11] 6,118 KB) discusses designing for individual needs and includes video of the long-tread low-riser steps in use.

These videos are excerpted from the new Ramp Project DVD; [four excerpts](#) are available online. This DVD is [available for purchase](#) from MCIL.

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inMOTION

Welcome Home to Accessibility

Sources and Resources to help achieve accessibility in the home

by Casey Patrick

Modular stairs and ramps relieve walking woes

Be it ever so humble . . . there's no place like home.

So why do so many people have trouble getting into and out of their own front doors?

One reason is that (according to the U.S. Department of Housing and Urban Development (HUD)) fewer than one in 10 homes in the U.S. is designed to accommodate people with mobility limitations.

“That’s why modular stairs and ramps may be the key to home accessibility for many people,” says Bob Zimmerman, an independent living counselor with the Minnesota Division of Rehabilitation Services in St. Paul.

The modular design recommended by Zimmerman was developed in 1992 by a professional engineer. It is suitable for people with a permanent or short-term need for a ramp or steps, can be built offsite in sections, installed quickly, used for as long as needed, and then be easily removed and used again at another site.

Zimmerman also specializes in helping to connect people with the financial and labor resources needed for construction of the accessibility projects.

In several cases, people have been able to save on labor fees by recruiting volunteers. An average-length ramp can be built by a group of three or four people with basic carpentry skills in about two days.

For example, in February 1998, the Home Ramp Project in Maryland enlisted the services of five volunteers, including a few board members of the Corporation for Assistive Technology. Even drizzling rain and temperatures below 40-



degrees could not dampen the builders' pride in the finished 30-foot ramp.

A step-by-step manual titled *How to Build Ramps for Home Accessibility* is available from the Metropolitan Center for Independent Living (MCIL) in St. Paul, Minnesota (see details at end of this article). The manual includes complete information on how to build a ramp or steps using MCIL designs.

Need Financial Assistance?

Even if costly medical bills have you in a financial bind, you still have options. Get in touch with your county's human services office for eligibility-based medical assistance, or your state's housing finance agency, for information regarding lenders. Inquire with your municipal government regarding community development block grants for federal funding. The specific names of contact departments or offices and eligibility requirements, if any, will vary from state to state.

You can also contact clubs or fraternal organizations that do volunteer work or fundraising projects in your community. Veterans may qualify for money from the Veterans' Administration and should contact a veterans' service officer for information. You may also get assistance regarding your specific needs from a Center for Independent Living in your area.

Although at this time it is not a routinely covered addition to a home, call your insurance representative to see if your condition may merit assistance for ramp or steps installation.

Ramp or Steps?

Although a ramp is necessary for wheelchair access, Zimmerman has found that long tread, low-riser steps are often more useful for lower extremity amputees. "I think the most important aspect of the steps is that most people find them easier than ramps to walk on," he says.

Many people with mobility impairments may continue to struggle with standard steps or have a ramp installed simply because they don't know about long-tread low-riser steps. Anyone who is able to walk, especially people with lower limb loss, a walker, a cane or crutches, may benefit from the steps.

Experiences

Rosemary Connelly



Over 150 people in the Minneapolis/St. Paul area have chosen the long-tread low-riser steps, including Rosemary Connelly of St. Paul, Minn., a 63-year-old, right below knee amputee.

"I can't even describe how happy I am with my steps. They're absolutely terrific!" she told InMotion. Connelly had thought about getting a ramp, but decided the steps would better suit her needs. She has had her steps for almost a year without any problems.

Ankle movement is limited for lower extremity amputees, Connelly notes. This can pose a problem when there is a slope on walking surfaces—but the steps are level. "My balance is absolutely fantastic," she says. "I have perfect leverage!"

She also controls her own momentum when walking down the steps because she is not fighting gravity traveling up and down. She carries packages without any difficulty and can maneuver as quickly, or as slowly, as she wants.

"Neighbors said 'Oh, you got a new deck,'" Connelly laughs. "It helps you feel better about it." The curves and angles incorporated in some step designs look more like an expression of aesthetic flare than an accessibility aid.

Connelly's husband says that he no longer worries when his wife goes up and down the steps by herself. Mr. Connelly, a volunteer at a VA hospital and a self-proclaimed, experienced wheelchair pusher,

also says that when his wife does need a wheelchair, he has no problems helping her up and down the long-tread, low-riser steps.

Often, people who have some walking ability still need to use a wheelchair part of the time. While the steps are not intended for independent wheelchair use, someone tilting the chair from behind and then rolling it to the next step can assist a person in a wheelchair up and down the steps.

Marjorie Herrmann

Connelly shared her experience using steps with Marjorie Herrmann, who had lost her right leg above the knee. Herrmann felt frustrated and helpless as she watched Connelly walk into her hospital room with relative ease. She refused to believe that Connelly was indeed missing a leg, until Connelly took off her prosthesis and showed her stump.

Herrmann said talking with Connelly gave her hope that she, too, could walk again. When Zimmerman visited her to explain how the stairs worked she was thoroughly confused. "I thought, 'I can't go up and down stairs,'" Herrmann told InMotion. She was worried about being able to live alone productively and comfortably and had them installed in hopes that they might help. Herrmann now walks up and down her steps with only a cane and recommends the steps to anyone who has trouble on even slight inclines like driveways.



Rick Reller



Rick Reller lost both of his legs below the knee and had steps installed four months after his amputation. A woman in a wheelchair temporarily had used the steps before Reller, and he had them relocated when she no longer needed them. Zimmerman says Reller saved about \$600-\$700 on materials alone by relocating already-built steps.

"They helped tremendously with access into my home," Reller says. He carries all kinds of things up and down his steps with no problem, from groceries and books for college to his dog Taylor, on a leash or in his arms. If Reller does need a wheelchair for some reason, he says assistance up and down the steps is easy, even considering his six-foot stature.

He praises the accommodating height of the riser and generous length of the tread and says he has never had any maintenance difficulties. In fact, Zimmerman reports that in his five years of installing ramps, he has never had any problems with shifting or movement; durability is not an issue.

Reller's elderly neighbor says standard steps are difficult, and finds the low riser steps easier to use. Lower-extremity amputees find the steps accommodating, but Zimmerman stresses that any older person with less strength and energy than in their younger days may find the steps helpful, as well as people with muscular dystrophy, arthritis, emphysema or other health-related conditions.

Michel Andreotti

"Everyone with leg problems could benefit from steps," says Michel Andreotti of St. Paul, Minn., who has had his set for two years. Forty-six-year-old Andreotti is a bilateral B/K who lost his legs because of diabetes.

Andreotti goes to dialysis three times a week and picks up his wife from work, and his steps provide him with the means to come and go as he pleases. "Anyone with a double amputation should have them—especially if they want independence," he says.

Besides creating a shorter distance to walk using less energy and helping with balance, the steps keep Andreotti's gait straight. If someone was to drive down his street and see him walking down the steps, Andreotti says that they

would not be able to tell that he was an amputee.

Winter's ice and snow are little threat when using the steps, Andreotti says. They are shoveled easily and, even with a thin coat of ice, they do not have the slope that can be hazardous on a ramp. Sturdy handrails and a narrower width are optional, which can help with stability by using your hands and arms.

Other Tips

Before you start building a ramp or steps, carefully consider your situation to determine the best choice for accessibility.

- Try stepping up and down a low curb or step between parallel bars with your therapist to see if steps are a good option.
- Try walking on a sloped surface to see if a ramp might be a better choice.

A building permit may be needed for your ramp building project. Contact the building code office for your community to find out the details. Telephone numbers should be listed in the Government section of the phone book under Building Inspection, or call the administrative office for direction.

- Take a manual or copies of the relevant pages with you when talking with local building officials. Individual manual pages can be printed from the web site quite easily.
- When speaking with local building code officials, be sure to inform them if the ramp will be temporary or permanent because this may have a bearing on whether or not a building permit is needed.

Your home should be a comfortable retreat, not a confining source of aggravation. You make every effort to ensure that visiting friends and family are comfortable when they come for a visit. Now it's your turn. Consider a modular ramp or set of steps to make your home as accessible as possible.

The How to Build Ramps for Home Accessibility manual is available on-line for reprinting at WheelchairRamp.org. To purchase a hard copy of the 63-page construction guide for \$10 or the video for \$15, contact the Metropolitan Center for Independent Living at (651) 646-8342. You may also write the MCIL at 1600 University Ave. W., Suite 16, St. Paul, MN 55104-3825.

Building for Convenience

The Department of Housing and Urban Development (HUD) offers a 60-page report filled with valuable information and strategies for those working to make home modifications, and the universal design principles they embody.

HUD has also published **Residential Remodeling and Universal Design: Making Homes More Comfortable and Accessible**, a guidebook for the housing professional or the do-it-yourselfer. You may browse these and other titles on line at <http://www.huduser.org/>, or call 800-245-2691.

The Center for Universal Design, a part of the School of Design at North Carolina State University in Raleigh, specializes in promoting accessibility and a universal design in buildings. Research, training, technical assistance, referrals and other information are available to individuals. People interested in universal design can obtain publications, videos and other resources. For more information, call 800-647-6777 or (919) 515-3082, or log on to The Center's Web site at www.design.ncsu.edu/cud.



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