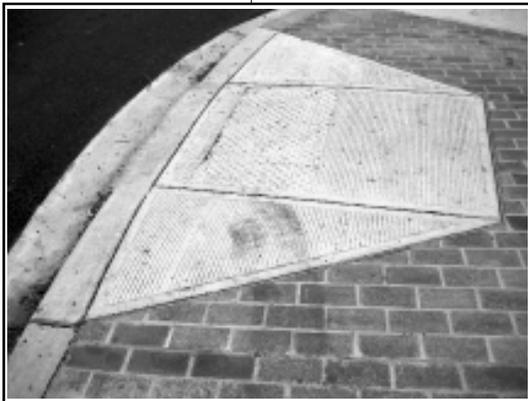


Variations Afoot for Detectable Warnings

A Brief Analysis on One City's Curb Ramps

By Andrew Yarrish, AIA

Walking around Washington, DC, I have noticed several approaches to providing detectable warnings at new curb ramps. The success of these different approaches is varied, so I went to the Americans with Disabilities Act regulations to try to clear up the matter.



Curb Ramp 1 features integrated detectable warnings.

The original Americans with Disabilities Act Accessibility Guidelines detectable warnings requirement for curb ramps was suspended from 1994 to July 26, 2001.

In March 2003, the US Architectural & Transportation Barriers Compliance Board (Access Board) released a memorandum that stated, "The revised specifications, if adopted, would permit wider dome spacing, an in-line grid pattern, and smaller surface coverage at curb ramps (24 inches instead of the full ramp length, set back from the curbline)." This revision responds "to concerns that had been raised about the impact

of the truncated dome surface on wheelchair maneuvering."

The following are examples of how that regulation has been in-

See Detectable Warnings, page 4

UD Theory in Action

Bringing a Practical Approach to Teaching

When we focus on "what" we want people to learn rather than on "how" we want them to learn it, we are moving toward universally designed instruction, according to Sue Kroeger and Gladys Loewen. For the past two decades, disability service providers have been focused on arranging accommodations for students with disabilities when instructors would not allow any flexibility in how the class would be taught. When embracing the universal design principles and applying them in the instructional setting, the focus shifts to a flexible environment where differences are planned for in the delivery of the course materials, thus reducing the need for accommodations.

Educators and promoters of universal design in instruction, Kroeger, the Director of the Disability Resource Center at the University of Arizona and Loewen, the Manager of Assistive Technology-British Columbia, say that universal design in instruction is simply the application of good teaching techniques. They think of it as multiple ways of demonstrating material. Whether training employees or teaching college students, instructors who can employ a

See UD in Education, page 6

CONTENTS

- 1 Variations Afoot for Detectable Warnings
- 1 UD Theory in Action
- 2 All Things Universal
- 2 Letters to the Editor: Universal Designing Explored
- 7 *RERC on UD at Buffalo*
- 7 Looking Back, Looking Forward
- 8 RERC Survey
- 10 Cabin Offers an Accessible Retreat

- Reg/LegWatch.....3
- World Update.....5
- New Media.....11
- New Products.....13
- Design Tip.....14
- Home for the Next 50 Years.....15
- Calendar.....16



All Things Universal

Jan. 1, 2004 marks the inauguration of the newly revised **UniversalDesign.com**, the official website of *Universal Design Newsletter* (UDN) and Universal Designers & Consultants Inc. We have revised our web site to become a portal for all things Universal. When you visit

UniversalDesign.com, you will find:

- Links to other universal design websites that offer products, publications and media; private design and consultation services; education and research opportunities; and governmental technical assistance

- A message board where you can participate with the rest of the universal design community in posing questions and responding with opinions and answers about accessibility, universal design and compliance with the Americans with Disabilities Act (ADA).

- A shopping cart where you can purchase publications and products offered by Universal Designers & Consultants and our affiliates.

- A new *Universal Design Newsletter* article every week, plus other information that will give you tips and insights into how people around the world are addressing design in a universal manner.

- All the back issues of *Universal Design Newsletter* available in PDF.

Free access to all areas of the new website will be provided to all *Universal Design Newsletter* paid subscribers.

We are especially pleased to make our index of names and terms found in back issues of *Universal Design Newsletter* available for the first time in an electronically searchable format. You will be able to find all the articles ever published in back issues of UDN about subjects such as playgrounds or detectable warnings and download the copy of the issue of UDN in which it was found.

The more than 10 years of UDN provide a wealth of historical and technical information about publications, projects and people involved in universal design, accessibility and compliance with the ADA. For example, the UDN Reg/Leg Watch column has reported on court decisions and regulatory activities that have shaped our understanding of what it means to be in compliance with the ADA.

Universal Design.com will be a new gathering place for the universal design "community." A place where you can find all things universal. We invite you to visit the new **UniversalDesign.com** website and participate with others in the universal design community.

jsalmen@UniversalDesign.com

Letters to the Editor: Universal Designing Explored

Dear Editor:

Thanks for the latest issue of the *Universal Design Newsletter* (Vol. 6, No. 8, October 2003). Your page 15 comment about "Universal Designing" ("Universal Designing: A Work in Progress Satisfies a Restless Personality") prompted me write. I appreciate the difference between Ron Mace's concept of universal design and Ed Steinfeld's concept of universal designing. I agree that UD is something we can approach, but not achieve and that the process is as important as the outcome. These are important concepts for designers to keep in mind when considering UD.

On the other hand, whenever we talk about UD

we acknowledge the importance of non-designers, e.g., customers and policy makers, to the advancement of Universal Design. I wonder if the term "Universal Designing" doesn't connote an exclusivity we really don't mean to convey -- UD'ing seems to be something only designers do. I for one would not want only designers to shoulder the burden of promoting UD. I treasure the ongoing discussion in our community about what we call this concept and how we define it, even as the field advances and we learn what it means to grow old. I hope we never stop re-examining what we're doing and thinking. I don't disagree with you and

See Letters to the Editor, page 6

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New ICC/ANSI A117.1 Approved

The International Code Council/American National Standards Institute (ICC/ANSI) A117.1-2003, Standard on Accessible and Usable Buildings and Facilities was approved by the ANSI Board of Standards Review on Nov. 26, 2003. The new standard will be published following a final review by the A117 Task Group on Editorial Changes. It is expected that the new standard will be available in early 2004, according to Larry Brown, Secretary of the ANSI A117 Committee.

New ADAAG Progress Expected in '04

The US Architectural & Transportation Barriers Compliance Board (Access Board) is currently wrapping up the regulatory assessment for the revised Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines, according to Dave Yanchulis of the Access Board. The Access Board hopes to submit the final rule and regulatory assessment to the Office of Management & Budget (OMB) soon, he says. The OMB then has 90 days to complete its review. "Barring any issues or snags, the Access Board would then proceed to publish the final version of the guidelines shortly after receiving OMB clearance," Yanchulis says.

Accessible Rail Cars Decision in Canada

In a milestone ruling, the Canadian Transportation Agency (CTA) confirmed that VIA Rail Canada Inc. (VIA) Renaissance trains do not meet the Agency's voluntary code for rail car accessibility and ordered the railway to remove obstacles to the mobility of travellers with disabilities.

In the October decision, the CTA ordered VIA to remove 14 obstacles on its new Renaissance cars. The decision followed a complaint filed by the Canadian Council of Persons with Disabilities (CCD). The CCD raised 46 concerns about the accessibility of certain features of the cars.

"The winners in this case are Canadians with disabilities," said Pat Danforth, Chairperson of the CCD Transportation Committee. According to Danforth, CTA has withstood numerous challenges from a powerful corporation and taken a stand in support of what is right — accessible transportation services. "Today's decision sends a

signal to other carriers — ignoring Canada's laws which uphold the equality rights of Canadians with disabilities will not be tolerated," said Danforth.

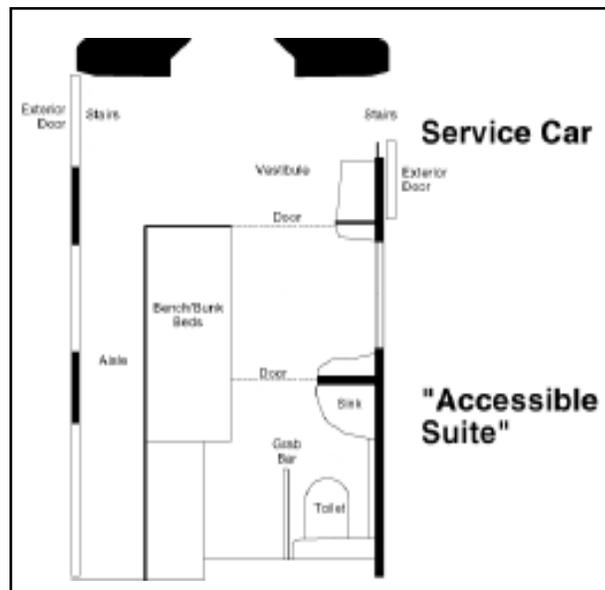
The majority of the obstacles relate to areas of the Renaissance trains that have been designed specifically to meet the needs of persons with disabilities. Among the modifications ordered were:

- To ensure that the door from the vestibule in the service car into the sleeper unit in the "accessible suite" is widened to at least 81 cm [31.89"]; and there is a wheelchair tie-down in the sleeper unit.
- In the economy coach cars, that there is a washroom that can accommodate persons using wheelchairs close to the wheelchair tie-down; that there is sufficient clear floor space in the wheelchair tie-down area to accommodate a person using a wheelchair and a service animal (e.g. guide dog); and that there is a seat for an attendant.
- In every coach car, ensure that, in addition to the four moveable aisle armrests that are presently in the cars, there are at least two additional moveable aisle armrests on the double-seat side.
- Ensure that the open risers on exterior stairs are closed.
- In overnight trains where a sleeper car service is offered, ensure that a service car is connected in such a way that the "accessible suite" is adjacent to the wheelchair tie-down end of the economy coach car which contains the wheelchair-accessible washroom, and this suite is offered as a sleeping accommodation.

VIA has 60 days from the date of the decision to submit plans implementing the modifications.

"Today's decision sends a signal to other carriers — ignoring Canada's laws which uphold the equality rights of Canadians with disabilities will not be tolerated"

Pat Danforth,
Canadian Council of
Persons with
Disabilities



This is a diagram of the Renaissance Train "accessible suite" prior to barrier removal. The suite contains bench/bunk beds located along the interior wall and a folding table along the exterior wall. There is a sink in the corner of the washroom. The toilet is located against the back wall and faces the sink.



Detectable Warnings, from page 1

terpreted by the designers of some Washington, DC curb ramps.

Curb Ramp 1

A recently completed concrete curb ramp, as pictured on the front page, has integrated detectable warnings. Horizontal grooves have been added to the ramp and its sides flared. The 24-inch deep grid of truncated domes is off set at 45 degrees, from the path of travel. I noted several shortcomings to these detectable warnings as constructed.

First, they don't have any color contrast with the adjacent surface since the detectable warnings are made of concrete similar to the rest of the ramp. This requirement is confusing since the original requirements stipulated that detectable warnings cover the full width and depth of the ramp. If detectable warnings are to contrast with the adjoining surfaces, it might follow that the curb ramp needs to contrast in color with the surrounding surfaces.

Secondly, the detectable warning coverage area does not begin at the curbline but rather approximately 5 inches back from the curbline. In this case, the curbline is the side of the curb immediately adjacent to the sidewalk.

Finally, several of the bumps were not completely formed resulting in an inconsistent grid of truncated domes. Indentations were created around the perimeter of the coverage area presumably by forms used to create the detectable warnings' in the soft concrete. Clearly this poured in place curb ramp surface was not well executed, but it also remains to be seen how the concrete bumps hold up over time.

Curb Ramp 2

Two rows of 12-inch square pavers with integral detectable warnings run along the bottom of the curb ramp. The light gray paver color contrasts with the adjacent red bricks providing for a clear visual delineation

where the curb ramp meets the street. The dome grid pattern is offset.

Curb Ramp 3

Granite curbs are common throughout Washington, DC. In this instance, the curb ramp and its flare sides have also been executed in granite. The detectable warnings are synthetic sheets inset into the granite.

The truncated domes are 24 inches deep and are arranged as an in-line



Curb Ramp 4 features contrasting color.

grid pattern, which facilitates smooth rolling for wheelchairs. In addition, the deep burgundy color of the synthetic truncated domes provides a strong visual contrast with the surrounding light gray granite surface. This example, similar to Curb Ramp 2 has the bottom edge of the detectable warning coverage area approximately 5 inches back from the curbline.

Curb Ramp 4

This new curb ramp provides a contrasting color; but it does not provide detectable warnings.

Conclusion

All except Curb Ramp 4, appear to follow the guidelines suggested in the March 2003 Access Board memorandum although some use the offset dome grid pattern. Only Curb Ramp 2 seems to fulfill all the requirements for detectable warnings.

Curb Ramp 1, with its inconsistent, non-contrasting truncated domes, falls short of the detectable warning requirements. It appears that using forms to provide truncated dome patterns for poured in place concrete curbs is easier said than done. Dome grid forms must be pressed into the concrete in order to fill the forms completely while avoiding the creation of abrupt elevation changes around the perimeter of the form.

Providing detectable warning coverage that extends to the curbline is critical. Texas Accessibility Standards Technical Memorandum 99-02 "recognizes the need to form a stable framework in concrete surfaces for proper alignment and installation of paver inserts at curb ramps" and allow a "border not exceeding four inches" at the bottom of the curb ramp surface. 

If detectable warnings are to contrast with the adjoining surfaces, it might follow that the curb ramp needs to contrast in color with the surrounding surfaces.



Curb Ramp 2 features integral detectable warnings.



Curb Ramp 3 features granite construction common in Washington, DC.

BRAZIL

International Conference on Universal Design

Rio de Janeiro, recently called the “world’s friendliest city,” will host Designing for the 21st Century III, An International Conference on Universal Design to be held Dec. 8-14, 2004. Adaptive Environments, the lead sponsor, is working closely with the Brazilian Host Committee to create interactive learning opportunities that will generate partnerships and projects with outcomes beyond the conference experience. A significant priority of Designing for the 21st Century III is to be a catalyst for building understanding and collaboration between developed and developing nations. Eight charette teams will address local problems through an intense problem-solving design process involving Brazilian and international participants.

In addition to emphasizing a dialogue between developed and developing economies, a particular effort is being made to focus attention on the relationship between sustainable and universal



Ricardo Gomes, Chair of the Student design Competition encourages students to work beyond their ‘comfort zone.’

design in the built environment and industrial design. The student design competition and Call for Proposals requests submittals that integrate universal and sustainable design. An International Educator’s Forum will create working teams to address educational challenges for design professionals outside of the mainstream western industrialized urban societies.

Ricardo Gomes, Chair of the Student Design Competition and Chair of the Department of Design and Industry at San Francisco State University said, “Designers, educators

and students should be encouraged to work and function outside of their “comfort zone” or sphere of influence.” Students will design a community center for a country in one of the three continents: Africa, Asia or Latin America, working with local contacts and a site-specific program for each community, with details of the culture, demographics, local norms of design and materials, economic conditions, assets and needs, and local resources.

For more information about the conference and about the student design competition, visit www.adaptiveenvironments.org/ or email: info@AdaptiveEnvironments.org

EUROPE

2010: A Europe Accessible for All

The European Commission is providing leadership toward “A Europe Accessible for All.” In response to the request by the Commission for knowledge about current accessibility conditions in the member states and guidance to improve access to the built environment, the European Union’s Expert Group on Accessibility produced recommendations focused on creating an inclusive and sustainable society. The recently completed report “2010: A Europe Accessible for All.” states, “Promoting accessibility for all will contribute to the European strategy for economic and social renewal,” and “Accessibility is a key to sustainable development because it enhances the quality of life and makes the urban environment more livable.”

The Expert Group was chaired by Domenico Lenarduzzi, Honorary Director-General for Education and Culture of the European Commission and included design practitioners, educators and advocates from across Europe. Their recommendations addressed buildings, the spaces around buildings, and information and communication technologies, with a comprehensive approach that cuts across different sectors and departments. The report emphasizes accessibility relating to employment and the need for an effective regulatory framework to foster a shift in attitudes and establish new positive behaviors. It notes, “Two complementary routes for the regulatory framework are a rights-based approach and specific legislation in all relevant areas such as transportation, construction, health, safety, information and communication.”

Their emphasis is mainstreaming accessibility and concludes, “No instrument or single text should be seen as a ‘magic wand’, which will deliver ac-



“Promoting accessibility for all will contribute to the European strategy for economic and social renewal...”

2010: A Europe Accessible for All Report

“World Update” is written by Elaine Ostroff, founding director of the Adaptive Environments Center. If you have information about international universal design efforts that you would like to have published in Universal Design Newsletter, write to us at: 6 Grant Ave., Takoma Park, MD 20912; or contact publisher@universaldesign.com.

UD in Education, *from page 1*

variety of practical techniques can reach more people.

Kroeger and Loewen have embraced the thinking of Carol Gill who has developed a model on disability that maintains if a disability is defined as a deficit needing to be fixed, the actual problem, an environment that excludes people, will not be addressed. She believes the focus should be on changing the environment to be more inclusive rather than exclusive.

Universally designed instruction is a way to make a learning environment inclusive. Kroeger thinks of it as instruction that works for “more” people regardless of learning style or background. “My classes have a variety of people in them — people with disabilities, people with diverse backgrounds, international students.... I ask myself ‘How can I deliver the material to reach the most people? How do I deliver the material so that the number of necessary accommodations can be reduced or eliminated?’ ” she says.

On the Web

Often simple website postings can eliminate the need for accommodations. For example, if notes are posted to a class website, the need to take notes is eliminated. It helps everyone. Loewen noted that a student with low vision once asked a professor to make his PowerPoint presentations available two days in advance of the class meeting. The student was then able to view the material with the Braille display before the class and be “on the same page” during the class. Now the professor posts it on the website in advance for everyone.

There are techniques that require little technology, such as Kroeger’s mini lecture format. In a class where there are students with disabilities and students for whom English is a second language, Kroeger presents a mini lecture, then splits the class into groups. In the groups, the students work together to answer assigned questions. The group responses are turned in for points. “The students work together,” says Kroeger. “It allows for all the students to feel more included. No accommodations are necessary. A lot of students have said that the group work was meaningful.”

Testing

Other professors have also adopted innovative techniques in teaching and testing. Loewen recalled a professor who posted the exam on the class website. Students were given a week to complete it. The students were told to complete three drafts of the exam and then pick one to submit for a grade. Students who might have normally needed accommodations, didn’t. They didn’t need extra time and they didn’t need a reader or a writer as they were able to write the exam when and where it suited them, using whatever technology that served them best.

She also remembers one innovative instructor who allowed students multiple ways of showing what they learned. The professor provided an outline of the course goals and objectives at the beginning of the semester. Students were asked to determine how they would demonstrate the learning of the materials using four activities of choice. Each student was asked to make a contract outlining their plan. Options to demonstrate their learning included exams, term papers, oral presentations, group presentations, and research projects.

There, of course, have been challenges to making instruction more universal. Kroeger says that some faculty and employers get caught in the grips of the “how” instead of the “what” they want students/employees to learn.

She notes one particularly inflexible statistics professor who required students to memorize formulas. He wouldn’t let anyone bring cards into class with formulas on them.

“We kept asking him ‘what it is you want students to know?’ He finally came to conclusion he wanted them to know how to appropriately apply the formulas,” she says. “Then he let everyone bring in cards and found it didn’t compromise what he wanted them to learn.”

“My classes have a variety of people in them — people with disabilities, people with diverse backgrounds, international students.”

Sue Kroeger,
Director of the
Disability Resource
Center, University
of Arizona

Letters to the Editor, *from page 1*

others that UD as a term is less than adequate to encompass the concept and practice. But I think of UD and Ron’s definition for it as an historical foundation we’ll continue to build on and around, not a rigid boundary.

James Mueller

Dear Editor:

I really appreciated your definition of universal designing as described in the October 2003 issue of *Universal Design Newsletter* (Vol. 6, No. 8). The very idea of a common way to describe and define UD that is graspable is so important, and apparently, too novel. That the definition of Universal Design is not *intuitive* is too absurd. I have always felt that we have to get the UD message out in different pieces and shapes that people want to hear and can use. It is sales: people buy something they want, not something we want to sell, so we need to couch what we offer in terms they will purchase.

Louis Tenenbaum, Potomac, MD



Looking Back, Looking Forward

The RERC on UD Year in Review

by Alex Bitterman

Editor's Note: The following is an interview with Edward Steinfeld, Director of the Rehabilitation Engineering Research Center (RERC) on Universal Design at Buffalo.

Question: This has been a successful year for the RERC on Universal Design at Buffalo. What, if any, accomplishment really stands out to you, and why?

Steinfeld: This year really marked the maturation of the RERC on Universal Design at Buffalo. As you point out, we have accomplished a lot this year so it is difficult to point to only one thing as "the" most important accomplishment.

Q: Which is the most notable research accomplishment from this past year?

Steinfeld: Well, from the research perspective, our work in anthropometry has produced the largest and most detailed three dimensional database on wheelchair users available. The database includes detailed body and device measurements and reach data on about 200 individuals who use wheeled mobility devices.

Q: How do you envision that the anthropometric information will be used?

Steinfeld: From our initial analysis, we know that the space requirements for wheeled mobility are very different today than they were in the 1970s when the research that lead to the requirements in the Americans with Disabilities Act (ADA) and other US codes were completed. The first paper on our findings will come out shortly. This year, we established a long term relationship with the U.S. Architectural & Transportation Barriers Compliance Board (Access Board) to expand our data collection and tie our research to codes and standards. With additional funding from the Access Board we have organized an international network of researchers, designers, software developers and officials interested in the anthropometry of disability. So there is now a dialogue developing in this research specialty that will facilitate the migration of findings to design practice.

Q: Which is the most notable development accomplishment from this past year?

Steinfeld: Definitely, the completion of a licensing agreement with Lasco Bathware to produce working prototypes of the Universal Bathroom is the key accomplishment for this year. Because Lasco is such major manufacturer of bath-

room products, we hope that our collaboration will lead to some significant innovations in the design of bathrooms of the near future.

Q: 2004 saw the Unlimited by Design Exhibition installed in two major venues...

Steinfeld: Yes, the Unlimited by Design Exhibits were successfully installed in two separate regional cities, Buffalo and Milwaukee. The two Unlimited by Design Exhibitions were attended by about 13,000 people. These installations helped us to develop and refine our exhibit program and provided an opportunity to learn a lot about how exhibits can be used to educate people on the concept of universal design.

Q: What do you feel are the greatest accomplishments of the RERC on Universal Design over the past four years?

Steinfeld: The theme of our original RERC grant was to "Build the Universal Design Community." I definitely think we have made a significant impact on the community of interest centered on universal design in these four short years. When we prepared our materials for a fourth year Summative Review by NIDRR, our sponsor, we had to list all our partners and collaborators. This proved to be a difficult task since we have worked with so many organizations and individuals in these four years. The list came to 268 collaborators and partners. And, we keep finding more that we left out! I think I speak for all my colleagues at the IDEA Center and the RERC team in being proud of how our work has contributed to community building. And we would be amiss in not mentioning the role that our partners and collaborators have played in all of our projects. We did not do anything alone. I think that the unofficial role of RERC is to advance the field. This means building bridges and relationships with others, not just doing everything solo. While we have made our unique contributions in research, development, dissemination and education, ultimately, it is how our work is received and used in the field that will make a difference. 

"From our initial analysis, we know that the space requirements for wheeled mobility are very different today than they were in the 1970s when the research that lead to the requirements in the Americans with Disabilities Act (ADA) and other US codes were completed."

Ed Steinfeld,
Director,
RERC on Universal
Design at Buffalo

The contents of this insert are provided by the Rehabilitation Engineering Research Center (RERC) on Universal Design at Buffalo, which is sponsored by a grant from the National Institute on Disability and Rehabilitation Research (NIDRR) U.S. Department of Education (DOE). These contents, however, do not necessarily represent the policy of DOE. Readers should not assume an endorsement by the federal government.



Have RERC on Universal Design Updates Been Useful?

A Survey for Universal Design Newsletter Readers

As of this issue of UDN, the RERC on Universal Design published a number of inserts updating *Universal Design Newsletter* readers on the exciting activities, projects, and plans of the RERC on Universal Design.

In our ongoing efforts to improve our dissemination activities, we would like to know if the *Universal Design Newsletter* inserts have been helpful to you. Please complete the questionnaire. Rate the effectiveness of each category below (where "0" indicates no value, and "5" indicates significant value).

Return the questionnaire before Feb. 1, 2004 to:
AEB1@ap.buffalo.edu (email)
subject line: UDN SURVEY ANSWERS
(e-mail containing only numbered responses to:

Or return the survey via **postal mail** to:
Alex Bitterman
Director of Information Design & Dissemination
Center for IDEA/RERC
University at Buffalo Hayes Hall
3435 Main Street
Buffalo, NY 14214-3087

**Complete and
return the survey
to RERC on
Universal Design
at Buffalo before
Feb. 1**

RERC Survey

1. I am aware of the RERC on Universal Design e-newsletter (www.ap.buffalo.edu/idea/e-newsletter).

Yes No

2. I have read at least one 4-page RERC supplement in the *Universal Design Newsletter* this past year.

Yes No

3. The 4-page RERC on Universal Design supplements in the *Universal Design Newsletter* have been informative and useful.

not useful at all 0 1 2 3 4 5 very useful

4. I believe the 4-page RERC on Universal Design supplement strengthens the *Universal Design Newsletter*.

strongly disagree 0 1 2 3 4 5 strongly agree

5. I became aware of the RERC on Universal Design at Buffalo through the *Universal Design Newsletter*.

Yes No

6. I became aware of *Universal Design Newsletter* through the RERC on Universal Design at Buffalo.

Yes No

7. I feel that the *Universal Design Newsletter* is a good value.

strongly disagree 0 1 2 3 4 5 strongly agree

Continued on page 9



RERC Survey, page 2

8. In general, I feel that the content of the *Universal Design Newsletter* is well written.

strongly disagree 0 1 2 3 4 5 strongly agree

9. In general, I feel that the content of the RERC on Universal Design inserts have heightened my interest in universal design in general.

strongly disagree 0 1 2 3 4 5 strongly agree

10. The content of the 4-page RERC on Universal Design supplement has spurred my interest in the work of other RERC centers.

strongly disagree 0 1 2 3 4 5 strongly agree

11. The following best describes my job (select all that apply):

- academic educational business owner private sector
- public sector architect/environmental designer
- management advocate activist
- other _____

12. I would like to see more of _____ covered in the *Universal Design Newsletter* and the RERC on Universal Design inserts.

13. I would like to see less of _____ covered in the *Universal Design Newsletter* and the RERC on Universal Design inserts.

14. In general, I feel that the *Universal Design Newsletter* focus on ADA is:

not enough 0 1 2 3 4 5 too much

15. In general, I feel that the *Universal Design Newsletter* focus on Assistive Technology is:

not enough 0 1 2 3 4 5 too much

Thank you for helping us track and improve our efforts to assist you.



Return the survey

to:

AEB1@ap.buffalo.edu

(email), subject line:

UDN SURVEY

ANSWERS

(e-mail containing

only numbered

responses).

Or mail to:

Alex Bitterman

Center for IDEA/

RERC

University at Buffalo

Hayes Hall

3435 Main Street

Buffalo, NY 14214-

3087

Cabin Offers an Accessible Retreat

A Project from the Universal Design Exemplars Project

Editor's Note: This is one of the projects from Universal Design Exemplars CD-ROM. The late Ron Mace, FAIA, was the architect. The exemplars project, led by the Center for Universal Design at North Carolina State University with support from the National Endowment for the Arts, NEC Foundation of America and the Trace Research Center, selected 32 entries from a variety of design disciplines on the CD-ROM. For more information, visit www.design.ncsu.edu/cud.

To retain the visual appearance of the surrounding natural ground surface, the entry walk was made of compacted soil and stabilized with the addition of a binding agent.

This retreat in the mountains of North Carolina was created by recycling an abandoned two-story 18-foot square cabin. The original structure was disassembled, moved to its present location, and, to double the accessible square footage, the top floor was placed at grade offset from the first floor by five feet. As the cabin was reassembled, universal features were incorporated throughout, making it inviting to a variety of users. The following are some of the cabin's accessible features:

- Integrated into the natural surroundings, and



A bay window adds to the interior square footage and increases the level of natural light.

easier and works well for people with low vision by minimizing unexpected tripping hazards.

- Wall plugs and light switches are set at convenient heights, within the range of 20 to 44 inches.

Doors and Windows

- All doorways are at least 36-inches wide with level thresholds and lever hardware.
- Large expanses of glass fill the gable ends of the roof and allow more natural light to fill the rooms than in traditional mountain cabins. The amount of light facilitates use of the cabin for people with reduced vision.

- A pass-through window from the kitchen facilitates dining on the deck.

Living and Kitchen Area

- A large bay window replaces the original cabin doorway, adds to the available maneuvering space just inside the new front door, and creates a well-lighted sitting area.

- A gas fireplace adds to the ambience and eliminates the necessity of chopping and hauling firewood. It sits on a stone slab with edges chiseled back so as not to interfere with maneuvering within the room and access to the door.



The counter height is 34 inches.



The cabin was placed on piers to integrate it into the natural surroundings.

to avoid disturbing the root field of the trees, the cabin was placed on piers rather than a continuous foundation. To retain the visual appearance of the surrounding natural ground surface, the entry walk was made of compacted soil and stabilized with the addition of a binding agent.

- By not over furnishing the cabin, the open floor space makes maneuvering in a wheelchair



Website Spotlight: New RERC at Buffalo Visitability Website

The Rehabilitation Engineering Research Center (RERC) on Universal Design at Buffalo has launched a Visitability web page. Located with the RERC on UD website at www.ap.buffalo.edu/idea/visitability/, the page contains information on existing state and local Visitability laws; an online Visitability Tutorial; and instructions on subscribing to a Visitability listserv.

Included on the site is a downloadable version of *Visit-ability: An Approach to Universal Design in Housing*. This 48-page booklet offers

an overview of Visitability requirements, the philosophy of the initiative, and resources in United States.

The site's online tutorial, *Visit-ability: A Computer-Based Tutorial*, is designed to promote and educate participants on Visitability and community action projects that support the development of visitable housing.

The site includes the opportunity to sign up for a Visitability Discussion List, sponsored by RERC. The listserv helps to maintain communication among those interested in visitability.



While these guidelines are not yet enforceable as design standards under the ADA, they can be used as a reference addressing access since they provide more specifics than is found in the current standards.

Universal Design Home Plans

Charles M. Schwab Architect, AIA has published *Universal Design 'Smart' Homes for the 21st Century*. The book includes 52 home plans that can be ordered and built. The plans are based on universal design principles and are designed for people of all ages, sizes and abilities. "Smart" features of the plans include instructions on how to receive an ENERGYSTAR label. The plans also specify sustainable building products, clean indoor air products, passive radon emissions details and optional Federal Emergency Management Agency-engineered safe room plans. The book also includes room-by-room descriptions of features and benefits. While the plans are designed for new construction, they can also be helpful in planning and designing additions and remodeling efforts. Twenty of the plans are for residences of less than 1,500 square feet.



Universal Design 'Smart' Homes for the 21st Century

makes its easy to conform to Section 508 requirements. A free download is available from <http://cita.rehab.uiuc.edu/software/office/index.html>. The project was funded by the National Institute on Disability & Rehabilitation Research and the Illinois Board of Higher Education.

Board Guides on Accessible Recreation Facilities

New guidance on access to various types of recreation facilities covered by the Americans with Disabilities Act (ADA) is now available in print from the U.S. Architectural & Transportation Barriers Compliance Board (Access Board).

The Access Board has published seven guides covering access to amusement rides, boating facilities, fishing piers and platforms, golf courses, miniature golf courses, sports facilities, and swimming pools and spas. They are based on guidelines the Access Board issued last year as a supplement to its ADA Accessibility Guidelines (ADAAG).

While these guidelines are not yet enforceable as design standards under the ADA, they can be used as a reference addressing access since they provide more specifics than is found in the current standards. The new guides are designed to help users become familiar with the guidelines, including the meaning and intent of specific provisions.

Single copies are available free from the Board and can be ordered at 800.872.2253 (v), 800.993.2822 (tty), or pubs@access-board.gov (e-mail). On-line versions of the guides posted at www.access-board.gov/recreation/guides/index.htm.

Accessible Web Publishing Wizard Version 1.0 for Microsoft Power Point

This new program allows authors to create accessible HTML versions of Power Point presentations with little or no knowledge of accessibility or HTML coding techniques. The American Federation for the Blind has reported that the tool



Cabin, *from page 10*

The thermostat is positioned within easy reach of the door and set at 44 inches above the floor.

- The cooktop has up-front easy-to-reach controls and knee space below. The countertop oven is usable by all—standing, seated, children, and people with limited reach.

- Counter are 34 inches high with 7-inch high toe space below base cabinets. The corner sink is shallower with a lever faucet. The corner location results in more counter space within easy reach of a person in a fixed position in front of the sink.

- The overhead cabinet is reachable from a seated position with one open side.

Bedroom

- Furniture is placed to avoid overcrowding and allow access and transfer from either side of the bed.

- The antique dresser was selected because it has a high toe space and the mirror tilts to allow viewing by seated and standing users.

Bathroom

- Access to the bathroom is via a 3-foot wide

pocket door from the bedroom. The pocket door eliminates a swinging door that would obstruct valuable floor space.

- The lavatory knee space is 3-feet 6-inches wide because the minimum of 2-feet 6-inches specified in many codes and standards is too narrow and confining for comfortable use. Supply and drain lines are insulated. The mirror accommodates both standing and seated users.

- A waterproof membrane is under the entire shower and bathing area making it possible to have a curbless shower. Water temperature and flow controls are set at 34 inches high. A hand-held shower is provided in addition to the fixed overhead shower. Shower seat and grab bars are planned for future installation.

- The electric heater for the room also warms the towels.

- Unobstructed clear floor space around the toilet provides users of mobility devices the opportunity to execute the kind of approach and transfer that is the most familiar, easiest, and safest to complete. When the maneuvering space is not needed, decorative or storage elements can be placed in the bathroom.

- Walls are sufficiently constructed to locate grab bars where desired. 



The curbless shower features water temperature and flow controls at 34 inches.

The pocket door eliminates a swinging door that would obstruct valuable floor space.

Position Announcement from the National Alliance for Accessible Golf

The National Alliance for Accessible Golf in Bloomington, IN is searching for an Administrative Coordinator. The details are as follow:

Start Date: ASAP

Term: One-year, full time appointment.

Compensation: \$40,000 –12 months.

Benefits: None. The position will be considered temporary until additional funding is secured. The individual filling the position will be considered an Independent Contractor with the Alliance.

E-mail resume and cover letter to naag@indiana.edu

For more information on the National Alliance for Accessible Golf, visit the Alliance web site at www.accessgolf.org.

World Update, *from page 5*

cessibility. The best results will be achieved through a combination...depending on the area concerned and the optimum moment. Every level of governance and all sectors of society should have the responsibility to mainstream accessibility within their own domain." The timeframe of 2010 corresponds with the implementation deadlines for the economic and social renewal agenda set at the Lisbon European Council.

Thanks to C.J. Walsh, Sustainable Design International Ltd., who provided these reports. Full reports can be found at: www.sustainable-design.com/arch/removingbarriers.htm#2003. 

NEW
PRODUCTS

PC Task Chairs

PC Task Chairs, from McDowell-Craig, are adjustable height, tilting office chairs designed to adjust to any user's size, support requirements, and working conditions. This ergonomically adjustable chair has eight separate adjustments. The chair raises and lowers pneumatically. The seat has a forward 6 degree negative tilt and a 12 degree back tilt, and locks at any angle forward through back. The back rest tilts forward and back from 77



PC Chair

through 119 degrees and also locks at any angle. The arms adjust up and down through 2.25 inches, and adjust in and out. The back also has a specially designed 4-inch thick lumbar support.

Text Telephone

The Voice Carry Over (VCO) is a text telephone universally designed to be used by individuals with and without hearing disabilities.

This phone features a hearing-aid compatible amplifier and automatic tone enhancement which amplifies the incoming voice up to 30 decibels. For people with severe hearing loss or who are deaf, VCO calls can be made through the local toll-free relay service. VCO enables the user speak in the normal fashion while displaying incoming messages as text on the screen. Other features include a ringer adjustable to 85 decibels; a hold button with auto release; an answering machine that takes text messages; memory dialing; a ring flasher; telephone line signal indicator; preset text messages for initiating VCO calls; a lighted, two-line, 20-character display; last number redial; and an amplifier button.



Text Telephone

Power Wine Opener

The Power Wine Opener is an electric corkscrew designed for use by individuals with arthritis or grasping disabilities.

This lightweight, rechargeable opener removes the cork from a wine bottle in fewer than 15 seconds.

To use, place the unit over the neck of the bottle and press the button. A foil cutter is included. The rechargeable unit opens 15 bottles on a single charge; a charger is included.



Electric Corkscrew

Patio Bistro

The Patio Bistro, by Char-Broil, is an electric outdoor grill designed for use by individuals who use wheelchairs and people who are seated. The unit consists of an elegant, curved table on casters with a round electric grill set in one end and a removable foam-insulated cooler set in the other. A weather-resistant cutting board doubles as a top for the cooler and can be used as a food tray. The height of the unit is suitable for seated users and the open base provides access for wheelchairs. The table is also equipped with a slot for hanging a towel and tool holders sculpted into the surface for ease in access.



Patio Grill

Information for this column was obtained from the ABLEDATA project, www.abledata.com, a computerized database of information on assistive equipment which is funded by the National Institute on Disability and Rehabilitation Research and is administered by ORC Macro International Inc., Silver Spring, MD.

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www.brookstone.com

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The Challenge of Safe Stairs

Nearly empty-nesters and approaching age 50 with the rest of the baby boomers, my wife, Ann, and I have designed and built our new "Home for the Next 50 Years." In doing this add-on to a historic building, we have attempted to carefully consider the Universal Design implications of every element and space while keeping in mind the actual users – our family and friends. This is an excerpt from my continuing journal investigating issues of Universal Design in the "Home for the Next 50 Years."

John P. S. Salmen, AIA

Although the Home for the Next 50 years has an elevator, the stairs also need to be as safe as possible especially in low light.

Although the elevator is immediately adjacent to the stairs so not to stigmatize its use, the stairs are also regularly used by those of us who want to get there faster, stay active and receive the cardio-pulmonary benefits of stair climbing.

To make the leading edge of the stair treads visually stand out (especially for aging eyes) we utilized quarter sawn oak for the treads and landings. Quarter sawn oak has a very light color that is dramatically different from the cherry used for the risers and stringers. As the cherry ages, it will become even darker and the contrast will be even greater.

Another aspect of the stair design was to have a triple switch back design, that allows a landing for resting every five risers. I also designed the treads to be 12" deep (1" wider than typical for a residence) creating a tread-to-riser ratio that is very comfortable even for aging stair users.

We also designed the stairs to accept a carpet runner. Carpet runners that are secured only at the point where the back

of the tread meets the bottom of the riser, and not tacked under the edge of the tread nosing, eliminate the tripping hazard of the projecting nosing at the front end of the tread by creating a beveled riser.

Handrails were also provided on both sides of the stairs. Alan Abrams, the designer who detailed much of the craftsman woodwork details in the house, developed a handrail section that allows opposition between the thumb and fingers, allowing a more secure grip. We provided extensions of the handrail at landings, or else terminated the rails in cherry newel posts. The flattened tops of the newel posts are now used as a resting place for things we want to carry up or down to another story on our next trip. 



Alan Abrams, the designer who detailed much of the craftsman woodwork details in the house, developed a handrail section that allows opposition between the thumb and fingers, allowing a more secure grip.

The treads were designed to be 12" deep (1" wider than typical for a residence) creating a tread-to-riser ratio that is very comfortable even for aging stair users.

March 2-4, 2004: *Workshop to Explore Use of Elevators in Emergencies, Atlanta, GA.* Hosted by the American Society of Mechanical Engineers (ASME) International, the workshop will explore the use of elevators by building occupants and fire fighters during emergencies. Contact: www.asme.org/cns/elevators.

March 10-12, 2004: *The US Architectural & Transportation Barriers Compliance Board* will hold its bi-monthly meeting in Washington, DC. Contact: 202.272.5434 (v), 800.872.2253 (v), 202.272.5449 (tty) or www.access-board.gov.

March 15-20, 2004: *19th Annual International Conference 'Technology and Persons with Disabilities,' Los Angeles, CA.* Sponsored California State University Northridge. Contact: www.csun.edu/cod/conf/index.htm.

Sept. -8, 2004: *7th International Federation on Ageing, 'Global Ageing: Sustaining Development,' Singapore.* Sponsored by IFA and the Singapore Action Group of Elders. Contact: www.7ifaconference.com.

Sept. 8-10, 2004: *Disabled Persons International (DPI) World Summit, Winnipeg, Manitoba, Canada.* This summit is for national assemblies, disability organizations, NGOs, international development agencies, as well as local and national goods and services providers in the disability field

to discuss and share information. Contact: www.dpi.org/en/events/world_summit/06-23-03_summit2004.htm

Oct. 4-7, 2004: *Retrofitting for Accessibility, Yellowstone National Park.* Sponsored by National Center for Accessibility, this training course is designed for maintenance professionals, facility managers, architects, access coordinators and planners. Contact: www.ncaonline.org.

Oct. 27-29, 2004: *Open Space: People Space, An International Conference on Inclusive Environments, Edinburgh, Scotland.* Hosted by OPENspace, the conference will provide a forum to review recent research and debate current issues surrounding good design for open space and social inclusion. Contact: openspace@eca.ac.uk or visit www.openspace.eca.ac.uk.

Dec. 8-12, 2004: *Designing for the 21st Century III, An International Conference on Universal Design, Rio de Janeiro, Brazil.* The overarching theme for the conference is "dialogue." The program will include traditional keynote presentations and plenary sessions, but the Call for Proposals will solicit program ideas that bring people together as equals for dialogue and collaboration. Places will be arranged for informal gatherings in and near the conference rooms. Contact: www.AdaptiveEnvironments.org or 617.696.1225 (v/tty).

Events to be placed in the UDN Calendar must be submitted to the editor two months before the publication date.

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Address Correction Requested

