

#6

DEFINITIONS:

Accessible, Adaptable, and Universal Design

CENTER FOR UNIVERSAL DESIGN

College of Design

North Carolina State University

Accessible, adaptable, and universal are terms now used to refer to housing or features in housing intended for use by people with disabilities and others. Each has different meanings and purposes. The differences are subtle but important. They are frequently used interchangeably and often are misunderstood. For clarification, the following explanations are those used by the Center for Universal Design.

Accessible Design: Accessible generally means that the dwelling meets prescribed requirements for accessible housing. Mandatory requirements for accessible housing vary widely and are found in state, local, and model building codes, in agency regulations such as in the Department of Housing and Urban Development's program 202 and 811, section 504, and the Fair Housing Amendments Act requirements. They are also found in standards such as the American National Standards Institute's A117.1 (ANSI A117.1-1986, 1998) and the Uniform Federal Accessibility Standards (UFAS).

Accessible features in dwellings include items such as wide doors, sufficient clear floor space for wheelchairs, lower countertop segments, lever and loop type handles on hardware, seats at bathing fixtures, grab bars in bathrooms, knee spaces under sinks and counters, audible and visual signals, switches and controls in easily reached locations, entrances free of steps and stairs, and an accessible route through the house. Most "accessible" features are permanently fixed in place and very apparent.

Adaptable Design: Some accessible features such as knee spaces under sinks and counters and grab bars in bathrooms are obvious and change the way an accessible dwelling looks and how it is used. Some people for whom these features are not essential, dislike the appearance and the reduction in base cabinet space. The small numbers of accessible dwelling units required to be accessible by law are intended to be usable by and rented to anyone and not held open exclusively for people with disabilities. Experience with accessible multifamily rental housing has shown the following:

1. Many non-disabled people prefer not to live in accessible units due to the appearance of clinical looking grab bars in bathrooms and unnecessary knee spaces in kitchens that sacrifice base cabinet storage space.
2. Some people with disabilities did not use all the accessible features due to preference or the severity of their disability. For example, people who cannot transfer themselves onto toilets or in and out of bathtubs may not need grab bars. Some wheelchair users may not wish to perform kitchen tasks or are unable to cook or wash dishes because they have severely limited use of their arms and hands and, therefore, have little need for kitchen knee spaces.

Some owners of multifamily rental housing have reportedly lost revenue by lowering rent to entice nondisabled people to live in accessible units. To overcome these and other problems, adaptable features have been developed and accepted as standards for accessibility. Adaptable features are either adjustable or capable of being easily and immediately added or removed to “adapt” the unit to individual needs or preferences.

An *adaptable* dwelling unit has all the accessible features that a fixed accessible unit has but allows some items to be omitted or concealed until needed so the dwelling units can look the same as others and be better matched to individual needs when occupied.

In an adaptable dwelling, wide doors, no steps, knee spaces, control and switch locations, grab bar reinforcing and other access features must be built in. Grab bars however, can be omitted and installed when needed. Because the necessary blocking is already provided, the bars can simply be screwed in place without opening the existing walls to install reinforcing. Knee spaces can be concealed by installing a removable base cabinet that can simply be unscrewed from adjacent cabinets and slipped out when needed or by installing self-storing cabinet doors that fold and slide back. Counter tops and closet rods can be placed on adjustable supports rather than fixed at lower heights as required for some wheelchair users. Standards for adaptable design have been incorporated into both ANSI and UFAS. These standards specify adaptability criteria, which will provide a level of full accessibility when adjustments are made.

Adaptable features are a marketing advantage for owners and occupants as they allow fully accessible dwellings to be closely suited to their users and marketable to anyone.

Adaptable design means readily adjusted. It does not allow building inaccessible units on the promise that they will be removed or remodeled for accessibility upon request. For this reason, it is best to think of adaptable features as those that can be adjusted in a short time by unskilled labor without involving structural or finished material changes.

Additional information about adaptable design in housing is available in the HUD publication *Adaptable Housing: A Technical Manual for Implementing Adaptable Dwelling Unit Specifications*, available from: HUD USER, PO Box 6091, Rockville, Maryland 20850, 1.800.245.2691, Publication #: HUD-1124 – PDR.

Universal Design: Items that are usable by most people regardless of their level of ability or disability can be considered universally usable. Many accessible and adaptable features are universally usable. For example, round door knobs are not usable by people with limited use of their hands, but lever handles which are readily available in all price ranges, styles and colors are usable by almost everyone, including people who have no hands. Some items are made more universally usable by their placement. Light switches located at a lower height and electrical receptacles raised to 15" to 18" above the floor place them within reach of most people without requiring bending or stretching. Bathtub controls located off center toward the outside of the tub provide the same benefit.

Some features are made more universally usable by making them adjustable. Closet rods, shelves and countertops are a few adjustable universally usable items. Some universally usable items must be selected. For example, to be easy, comfortable and functional for most people, a water cooler may need to be a dual height model with both standard and lower spouts and controls. To create a universally usable group toilet room, two types of accessible toilet stalls may need to be installed. A universally usable landscape design may include alternative paths free of steps and stairs. The widespread inclusion in product design of universally usable features such as touch sensitive controls is bringing the universal approach into the market for consumer items.

Universal design addresses the scope of accessibility and suggests making all elements and spaces accessible to and usable by all people to the greatest extent possible. This is accomplished through thoughtful planning and design at all stages of any design project. It need not increase costs nor result in special, clinical or different looking facilities. Universal design requires an understanding and consideration of the broad range of human abilities throughout the lifespan. Creative application of that knowledge results in products, buildings and facilities that are usable by most people regardless of their age, agility, or physical or sensory abilities.

By incorporating the characteristics necessary for people with physical limitations into the design of common products and building spaces, we can make them easier and safer for everyone to use and more widely marketable and profitable. The universal design approach goes beyond the minimum requirements and limitations of accessibility law.

For more information, contact:
Center for Universal Design, College of Design
North Carolina State University, Box 8613
Raleigh, NC 27695
919.515.3082 voice and TTY
919.515.8951 fax