Universal Design and Visitability Regulations: The City of Arvada Experience

Planning Commissioners Workshop 2007
March 10, 2007

Presenter: Vicky Reier, Assistant to the City Manager
City of Arvada
UNIVERSAL DESIGN

• City of Arvada – Accessibility Committee & Building Division of Public Works, Community Development
• Changing Demographics
• What is Universal design?
• Principles

*Source: the Center for Universal Design, North Carolina State University
**CHANGING DEMOGRAPHICS**

- Today’s average life span is 76 years
- Nearly 80% of today’s population lives past 65 years
- According to the latest census figures, in the last 10 years, Arvada has seen a 37% increase in residents between the ages of 45-64
- During that same 10 years, Arvada has experienced a 61% increase in residents 65 years or older
- People have a desire and need to stay in their community and home as they experience life’s changes
- More people are now living with disabilities
- These trends continue
WHAT IS UNIVERSAL DESIGN?

• DEFINITION:

Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

The intent of universal design is to simplify life for everyone by making products, communications, and the built environment more usable by as many people as possible at little or no cost. Universal design benefits people of all ages and abilities.
PRINCIPLES OF UNIVERSAL DESIGN

The authors, architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines including environments, products, and communications.

These seven principles may be applied to evaluate existing designs, guide the design process and educate both the designers and consumers about the characteristics of more usable products and environments.
The design is useful and marketable to people with diverse abilities

- Provide the same means of use for all users: identical whenever possible; equivalent when not.
- Avoid segregating or stigmatizing any users.
- Provisions for privacy, security, and safety should be equally available to all users.
- Make the design appealing to all users.
PRINCIPLE 2
FLEXIBILITY IN USE

The design accommodates a wide range of individual preferences and abilities

- Provide choice in method of use.
- Accommodate right or left handed access and use.
- Facilitate the user’s accuracy and precision.
- Provide adaptability to user’s pace.
PRINCIPLE 3
SIMPLE AND INTUITIVE

Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.

- Eliminate unnecessary complexity
- Be consistent with user expectations and intuition
- Accommodate a wide range of literacy and language skills
- Arrange information consistent with its importance
- Provide effective prompting and feedback during and after task completion
PRINCIPLE 4
PERCEPTIBLE INFORMATION

The design communicates necessary information effectively to the users, regardless of ambient conditions or the user’s sensory abilities.

- Use different modes (pictorial, verbal tactile) for redundant presentation of essential information
- Provide adequate contrast between essential information and its surroundings
- Maximize “legibility” of essential information
- Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions)
- Provide compatibility with a variety of techniques or devices by people with sensory limitations
PRINCIPLE 5
TOLERANCE FOR ERROR

The design minimizes hazards and the adverse consequences of accidental or unintended actions

- Arrange elements to minimize hazards and errors: most used elements, most accessible, hazardous elements eliminated, isolated or shielded
- Provide warnings of hazards and errors
- Provide fail safe features
- Discourage unconscious action in tasks that require vigilance
PRINCIPLE 6
LOW PHYSICAL EFFORT

The design can be used efficiently and comfortably and with a minimum of fatigue

- Allow user to maintain a neutral body position
- Use reasonable operating forces
- Minimize repetitive actions
- Minimize sustained physical effort
PRINCIPLE 7
SIZE & SPACE FOR APPROACH AN USE

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body, posture, or mobility.

- Provide a clear line of sight to important elements for any seated or standing user
- Make reach to all components comfortable for any seated or standing user
- Accommodate variations in hand and grip size
- Provide adequate space for the use of assistive devices or personal assistance
RESIDENTIAL DESIGN

LITTLE OR NO COST

• Zero step entry. (little or no cost)
• Wider front door. (no cost)
• Wider interior doors. (little or no cost)
• Lever handles on door hardware (little or no cost)
• Wider hallways. (no cost)
• Larger first floor bathroom for maneuverability. (little or no cost)
Questions/Comments