Universal Design and Visitability Regulations: The City of Arvada Experience

Planning Commissioners Workshop 2007

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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**.

PRINCIPLE 1
EQUITABLE USE

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)


Northwest Quadrant Study
Prepared by:


TRAFFIC ENGINEER

Questions/Comments