

Accessible Garden Design

Continuing Education Program
Madison Area Master
Gardeners Association

Accessible Garden Design

Careful planning will
bring great pleasure &
avoid costly mistakes

Objectives

- Complete a Site Analysis
- Learn the Elements of an Accessible Garden Design
- Brainstorm ways to make the Garden Accessible

Analysis

Examples of a Client's Needs:

- Needs to remain Seated, Standing or Leaning
- Needs Stable, Flat Surface, Slip Resistant
- Needs Barrier Free Access
- Needs to remain in the Shade (or Inside)

Examples of a Client's Desires:

- Desires to Listen, See, Smell, Taste and/or Touch

Analysis

Example of Hardware:

- Wheelchair, Scooter, Walker, Crutches, Cane and any other Mobility Device

Example of Hardware Needs:

- Pathway Width
- Surface Material
- Barrier Free Access

Analysis

Examples of Design Needs

- Access Regulations (Standards) - Public
- Height/Reach Limitations of Structures
- Storage and Transportation of Tools, Water, Plant Material
- Cost – Use of Recycled Materials

Analysis

***Don't forget about
Aesthetics!!***

***Don't forget about
Environmental Needs!!***

Analysis

- How wide is the path to the garden?
- How wide are the paths in the garden?
- Are there any steps in the paths?
- Are there any slopes in the paths?
- What are the paths made of?
- Are there any holes or cracks in the paths?

Analysis

- Where are the tools stored? Is it close to the garden?
- How heavy are the tools?
- Where is the hose? Could you trip on it?
- Is there any place to sit down? Shade?
- How tall are the planting beds? Are they easy to reach?
- Where is debris stored? Is it accessible?

Analysis

- Will someone in a wheelchair be able to move through the garden?
- Will someone in a wheelchair be able to work in the garden?
- Will someone who can not see well be able to walk through the garden?
- Is there anything they might trip on?

Public Places – ADA Stds.

**Gardens should be accessible for
*EVERYONE!***

***The term
"handicapped"
has negative
connotations and
was omitted
from the ADA.***



Public Places – ADA Stds.

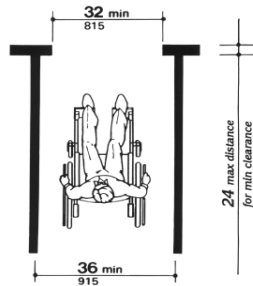


**AMERICANS WITH
DISABILITY ACT (ADA)
STANDARDS FOR
ACCESSIBLE DESIGN
28 CFR Part 36**

There are specific elements to incorporate into a garden design to make it accessible.

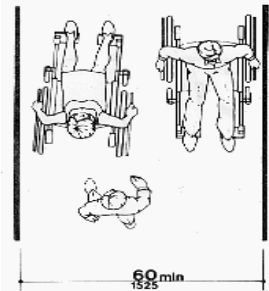
Design - Standards

- **Wheelchair Passage Width.** The minimum clear width for single wheelchair passage shall be 32 inches at a point and 36 inches continuously.



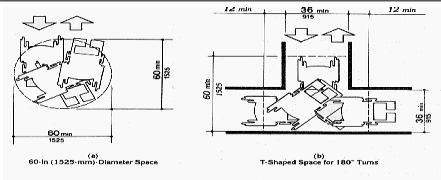
Design - Standards

- **Width for Wheelchair Passing.** The minimum width for two wheelchairs to pass is 60 inches.

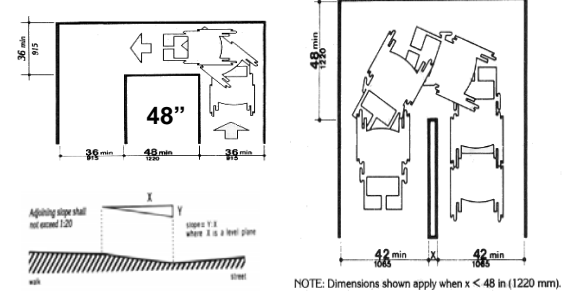


Design - Standards

- **Turning Radius -** The space required for a wheelchair to make a 180-degree turn is a clear space of 60 inches diameter or a T-shaped space.



Design - Standards



Design - Surface

Accessible Route...

- A continuous unobstructed path connecting all accessible elements and spaces of a building or facility.

Design - Surface

- **What surface characteristics are required of an accessible route?** The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires only that newly-constructed or altered ground and floor surfaces of accessible routes on sites and in buildings and facilities be stable, firm, and slip-resistant.

Design - Surface

What is slip resistance?

- In its simplest sense, a slip resistant surface is one that will permit an individual to walk across it without slipping.
- Contrary to popular belief, however, some slippage is in fact necessary for walking, especially for persons with restricted gaits who may drag their feet slightly

Design - Surface

"Walking is nothing more than the successive loss and recovery of balance."



--The Magic of Walking
Aaron Sussman and Ruth Goode

Design - Surface

What other considerations are significant for persons with disabilities?

- Materials such as gravel, wood chips, or sand are neither firm nor stable, nor can they generally be considered slip-resistant.
- Walks surfaced in these materials could not constitute an accessible route.

Design - Surface

- Some natural surfaces, such as **compacted earth**, soil treated with consolidants, or materials stabilized and retained by permanent or temporary geotextiles, gridforms, or similar construction may perform satisfactorily for persons using wheelchairs and walking aids.

Design - Surface

Paved surfaces can be aesthetically pleasing while still functional!

Watch the cost!

Design - Surface

- Compacted **crushed stone or gravel** when properly installed is firm, level, well-drained, and is among the less expensive options.
- It tends to loosen with freeze/thaw action that may require spring compacting; it may track around when wet.

Design - Surface

- **Stone mixes** should contain a blend of sizes ranging from 5/8-inch (angular, not smooth and round) with everything smaller down to coarse sand ('fines') left in to fill gaps between larger pieces as it is compacted. **NO PEA GRAVEL.**
- A mix called "screenings" is a good, inexpensive choice where available.

Design - Surface

- **Wood** is clearly an attractive option for above-ground decking ramps and even walkways.
- Planks are slick when wet, require regular protection from the elements, and are more expensive.
- Worth considering are the newer versions of **plastic 'wood'** that are extremely durable and come in a range of colors.

Design - Surface

- **Asphalt or concrete** are the least expensive solid surfaces.
- Asphalt's dark color reduces glare but also absorbs heat in full sun that may make the garden unusable at certain times of the day.
- This feature does enable it to dry and melt snow/ice more quickly.

Design - Surface

- **Plain concrete** is durable but not very attractive and produces uncomfortable glare in sunlight, particularly for older gardeners.
- **Exposed aggregates**, coloring added to the mix, and/or stamps that apply hundreds of patterns and textures can be used.

Design

To describe the garden simply as "wheelchair-accessible" is to overlook its artistry and the diverse sensory experiences it provides to residents.



Design

Creative elements of art and landscape design integrate with functional elements to produce a place for environmental interaction.



-- B.J. Novitski
Managing editor for
ArchitectureWeek