

ACCESSIBLE RAMP BASICS

Accessible ramps improve access for many people. They can be useful for people who use wheelchairs or walkers as well as parents with strollers. When assessing a site for installation of a new ramp, refer to the following guidelines, informed by building code and the Americans with Disabilities Act (ADA) standards.

Tip: Always consider the unique strengths and needs of the intended ramp user. Depending on the user's needs, a less steep ramp than the ADA maximum slope of 1:12 may be required to support safe and independent access.

Safety First!!

Ramp Slope: Maximum ADA slope is 1:12, which means 1" of rise for every 12" of run. For example, with a total rise of 20", a ramp would need to be 20' long.

(Note: Residential codes allow for slope as steep as 1:8. However, that slope is too steep for many people to walk or roll along independently. Steep ramps are also more difficult for a helper to push a person in their wheelchair).

Ramp Width: ADA calls for at least 36" between handrails (and handrails on both sides of ramps). This minimum width also permits a helper to walk alongside, if required.

Materials: If building the ramp out of wood, be sure to use pressure treated wood, to avoid rot. Use screws or nails designed for pressure treated wood so they won't rust away.

Handrails, both sides: Install grippable handrails on both sides, 34"-38" above the ramp surface. This helps the main traveler as well as anyone assisting alongside.

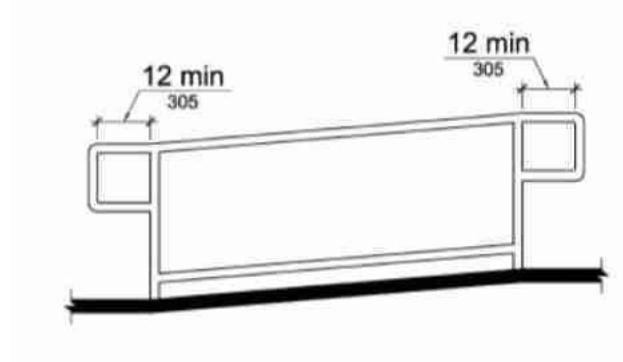
Handrail Return Ends: Make sure handrails have return ends to prevent falls secondary to snagged clothing or bags.



Return Ends (red circles)

Handrail Extension:

Where possible, run the handrail about 12" longer than the top and bottom of the ramp. This provides support for people all the way on and off the ramp and onto the landing.



Grippable Handrail Size:

For a safe and secure grip, make sure the grippable handrail meets dimensions a person can wrap their fingers around

UBC Option 1

Examples of typical handrail shapes

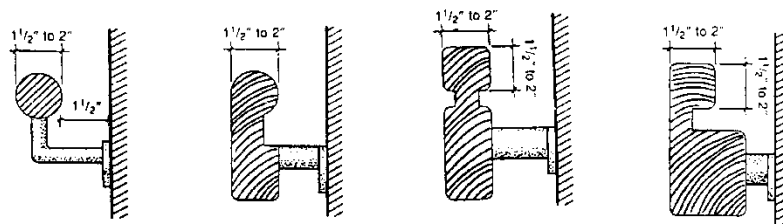


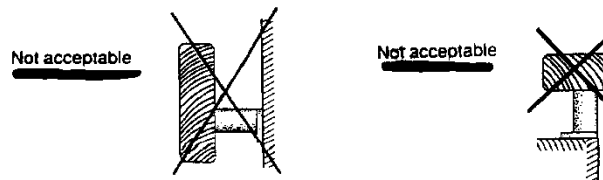
Figure No. 1—The first option requires handrails to not be less than 1 1/2 inches or more than 2 inches in cross-sectional dimension.

UBC Option 2

Examples of alternate equivalent handrail shapes



Figure No. 2—The second option allows an equivalent gripping surface



Examples of Grippable Handrail Shapes & Sizes

Non-slip:

Add a non-slip surface to the ramp.

In our wet climate, wood can become slippery over time. The addition of asphalt shingles, roll roofing, or non-slip sandy paint are some options that can make ramps safer.



Non-slip Surface

Ramp Edge:

Where there is a drop off at the ramp's side edge, provide either a guardrail, or edge protection that is at least 2 inches high for added safety.



Ramp Edge Guard (red circle)

Threshold Edge:

Thresholds and edges at the top and bottom of a ramp should be as smooth as possible to prevent tripping hazards.

The national standard guideline calls for a maximum blunt edge of $\frac{1}{4}$ " and maximum beveled edge of $\frac{1}{2}$ ".

Anything higher is difficult to roll over and can be a tripping hazard.

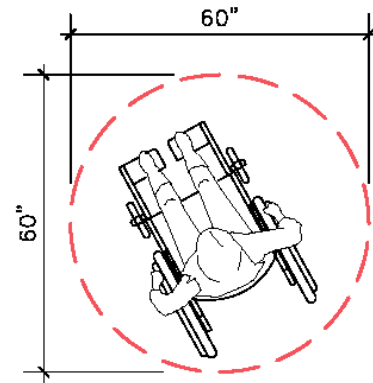
To reduce high edges, add a piece of beveled wood or a product such as *Asphalt Cold Patch* to create a smooth transition.



Asphalt Cold Patch is Used to Reduce This Threshold Edge (red circle)

Turning Radius:

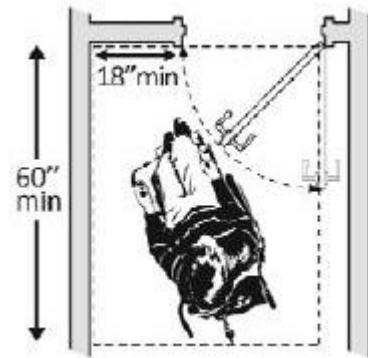
All landings need to be a minimum of 5' x 5' to provide a minimum turning circle for people using wheelchairs and walkers.



Door Clearance at Landing:

When the main door (or storm door) at the top of the ramp landing swings out, the landing needs to be oriented to ensure 18" clear access on the pull side of the door.

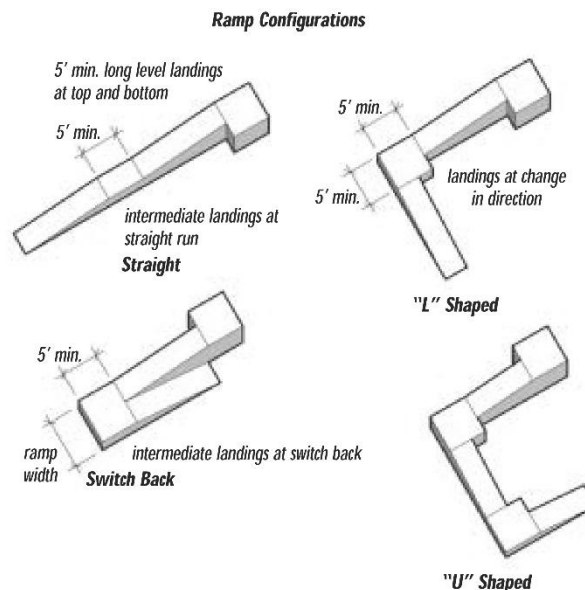
This will allow the person using a wheelchair or walker to be out of the swing of the door.



Ramp Layout Configurations:

For safety, code dictates that a minimum 5' landing is required at every 30" of ramp rise. That means that ramp runs cannot exceed 30 feet.

This is because it takes more stamina for a person using a wheelchair to propel themselves up a long incline. Similarly, when descending a longer ramp run, it may be harder to control acceleration when using either a wheelchair or walker.



Note: The site will also determine the best ramp configuration.

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Grantees undertaking projects with government sponsorship are encouraged to express freely their findings and conclusions. Points of view or opinions do not, therefore, necessarily represent official ACL policy.

This information is modified from the SAIL Home Modifications for Aging in Place resource. For more information on general accessibility or to learn more about our HomeMAP assessments, please call SAIL at 907-586-4920.

Additional Resources:

- Americans with Disabilities Act (ADA): 2010 ADA Standards for Accessible Design, Department of Justice
- American National Standards Institute, ANSI: as adopted by the International Building Code

