

RAMPS *and the* ADA

U.S. businesses are ramping up. Here's what the Americans with Disabilities Act requires in an access ramp.

by Kenneth Hoffman

The Americans with Disabilities Act (ADA) was signed into law on July 26, 1990. The ADA is a far-reaching law that prohibits discrimination against disabled persons in employment, public accommodations, government services, and telecommunications. On January 26, 1992, the law went into effect for existing buildings. Building owners are now required to remove barriers that inhibit accessibility where "readily achievable" — that is, where "it is able to be accomplished easily and without much difficulty and expense."

The ADA affects five million public buildings — shops, stores, hotels, restaurants, theaters, doctors' offices, libraries, museums, day care centers, private schools, parks, bowling alleys, etc., as well as office buildings, warehouses, factories, and state and local government buildings.

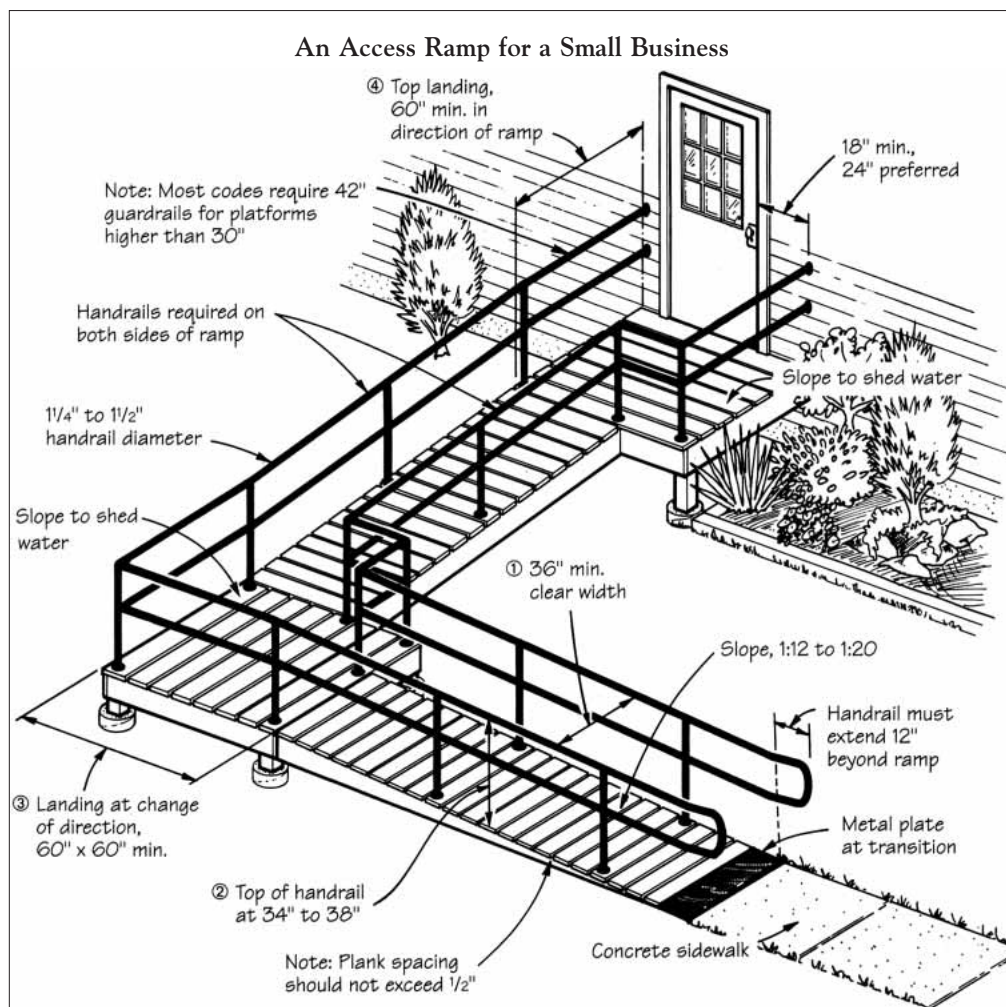
The ADA places a high priority on enabling people with disabilities "to get through the door" of a public building. And first among the "readily achievable" measures named are access ramps. This article will explore ADA requirements for ramp design.

What Is a Ramp?

Let's start with some basics, like agreeing that a ramp is an inclined surface. But, is *any* inclined surface a ramp? No, not according to the law. The angle of a ramp is referred to as "slope," meaning the ratio of the vertical *rise* to the horizontal *run*. Slope in access ramps must not exceed 1:12.

According to the ADA, any inclined surface with a slope between 1:12 and 1:20 is a ramp and must conform to all the other standards for access ramps. The *maximum total rise* for a ramp is 30 inches between landings. The *maximum total run* between landings is 30 feet for ramps with slopes from 1:12 to 1:16, and 40 feet for ramps with slopes from 1:16 to 1:20.

Ramp width. Under the ADA, a ramp must have a minimum clear width of 36 inches. However, Massachusetts, where I work, sets a 48-inch minimum clear width between the handrails. You will need to check your local accessibility code for



State Accessibility Codes vs. the ADA

	①Min. Clear Ramp Width	②Handrail Height	③ Min. Size of Intermediate Landing	④Min. Length of Top Landing
ADA	36"	34" - 38"	60" x 60"	60"
California	48"	34" - 38"	72" x 48"	Door width +42" (60" min.)
Massachusetts	48"	34", lower rail at 19"	48" x 48"	60"
Washington	36" interior 44" exterior	34" - 38"	60" x 60"	60"

Figure 1. This access ramp meets the requirements of the ADA for small businesses, but it may not meet all state and local accessibility codes. The chart illustrates how some state codes differ from the ADA.

Clearances at Outward Swinging Entry Doors

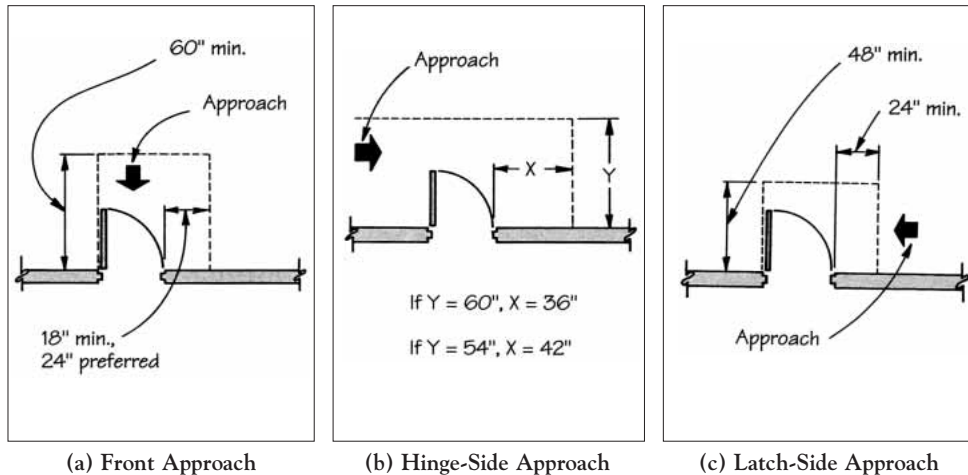


Figure 2. The ADA specifies different clearances at outward swinging entry doors, depending on the direction of approach.

departures from the ADA standard. If your local code differs from the ADA, in most cases you will be required to meet the more stringent regulation. The chart in Figure 1 (previous page) gives specific examples of how certain state codes differ from the ADA.

Landings

Platforms or landings are required for turning and resting. They must be provided at the top and bottom of a ramp and wherever a ramp changes direction. All landings must have a minimum clear length of 60 inches, and where a ramp changes direction, the landing must be at least 60 x 60 inches.

The top landing at the point of entry poses some problems, beginning with the door swing — usually outward for entry doors. ADA requirements for top landings at outward swinging entry doors are shown in Figure 2. Note the minimum clear floor space on the latch side of the door, which allows the person in the wheelchair to be clear of the door swing on that side.

In addition, the exterior threshold must not exceed 1/2 inch in height. The threshold doesn't need treatment if it is 1/4 inch high or less. From 1/4 to 1/2 inch high, the threshold must be beveled with a slope no greater than 1:2. (Massachusetts regulation requires a slope of 1:4).

Handrails

If a ramp has an overall rise of greater than 6 inches or an overall run of more than 72 inches, you must include handrails on both sides. Handrails must be installed in pairs on both sides of a ramp, at a height of 34 to 38 inches, measured vertically off the ramp surface. Handrails should extend at least 12 inches beyond the top and bottom of the ramp "parallel to the floor or ground surface" and return "smoothly" to the post, wall, or floor.

Handrails should also be continuous from one end to another without posts or other obstructions. Also, handrails may not rotate within their fittings.

The handgrip portion of the handrails should be round or oval, with no sharp corners, and have a diameter between 1 1/4 inches and 1 1/2 inches. On railings mounted to a wall, the space between the rail and the wall should be 1 1/2 inches. A greater distance would allow an arm to slip and wedge between wall and handrail in the event of an accidental fall, perhaps resulting in a more serious injury.

Massachusetts goes beyond the ADA by requiring two handrails along access ramps — one at a height of 34 inches to 38 inches and a lower one at a height of 19 inches. Even though your state's code may not require the second rail, you should consider adding it. The lower rail is much easier for people in wheelchairs to grasp.

Also, code regulations for preventing accidental falls from elevated surfaces apply to ramps. Ramps and landings above 30 inches in height have to have a guard rail at least 42 inches high. The guard rail lessens the chance that an inattentive adult briskly backing up to clear the travel path could topple backward over a 34-inch-high railing. If such an accident were to occur, it is likely that litigation would follow. In such a case, the contractor might find himself facing the old legal test that he "knew or should have known" that such a design was inherently faulty.

Ramp Surface

Ramp surfaces should be stable, firm, and slip-resistant. When choosing the surface for a ramp, keep in mind that some textured materials may hold ice and snow and may be difficult to clear with a shovel. If the

client wants a carpeted ramp, use a high-density, low-pile, non-absorbent material. Install it without padding and make sure it is stretched tightly and securely anchored. Also, carpet that ends in the path of travel must be secured with an edging strip.

Construction Considerations

As for ramp construction, for most small jobs you can use standard wood framing methods and materials. Be sure to conform to your code's minimums for loading capacity. For total rises up to 24 inches, it may be more cost-effective to form up and pour concrete. Also, certain types of buildings may require fire-resistant construction, which might necessitate concrete.

For More Information

You can get a free copy of the ADA by calling 202/514-0301, an information number set up by the Department of Justice in Washington, D.C. When you call, you will hear a series of recorded messages. For quickest results, don't select any of the options presented to you, but stay on the line and give your name and address directly to an operator. I did this and received a copy of the ADA within a week. (If you leave your name and address on the tape machine, promised delivery time is four weeks.)

Or you can write to the Office on the Americans with Disabilities Act, Civil Rights Division, U.S. Department of Justice, P.O. Box 66118, Washington, DC 20035.

If you have access to a legal library, you can find the ADA in Volume 56, Number 144, of the Federal Register, beginning on page 35,544. The Accessibility Guidelines, which give design specifications and dimensions, begin on page 35,605. ■

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