



Answers to questions about structures, ventilation, soil, water, waste, energy, machinery and safety.

## Improving access for the disabled

The Americans with Disabilities Act, or ADA, (also referred to by some as the "Attorneys Employment Security Act") requires that public buildings provide equal access of goods and services to their patrons, regardless of disability.

While opponents of the ADA think this is just another way for "government" to tell them what to do, numerous homeowners have called me recently asking for this information to help them improve handicap accessibility to their homes. So here is a quick summary of some minimum ADA requirements, to serve as a starting point for making home improvements.

- Make outdoor paths at least 36" wide, with a firm, slip-resistant surface. Remove objects that protrude more than 4" into a path. Objects must be within 27" of the ground to be "cane-detectible" or higher than 80" to provide clear headroom.
- Make parking spaces at least 8 feet wide for cars, plus 5 feet for wheelchair access.
- Install non-slip ramps or curb cuts with a 1:12 (1 inch of rise per 12 inch horizontal run) or flatter slope, with no more than 30" of rise between landings. If ramps are longer than 6 feet, put 1½" diameter railings on both sides, mounted 34"-38" high and with at least 36" (48" recommended) of width between them. Provide a 5-foot long level landing for every 30 feet of horizontal length of ramp.
- Doors should have at least 32" of clear opening (36" recommended) for wheelchair access, with a threshold less than 1/4" high (or ½" high, if beveled). Doormats should be ½" high or less, with the edges secured to the floor. There should be at least 18" of clear wall space on the pull side of the door next to the handle. The handle should be no higher than 48" above the ground and operable with a closed fist (levers work well). The door should open using 5 lb-ft. or less of force (use a fish scales to check this).
- Hallways and bathrooms need at least 36" of clear width (48" recommended), with a 5-foot diameter circle or T-shaped space for a person in a wheelchair to reverse direction. Any carpet used should be a tightly-woven, low-pile variety.
- Locate controls 15"-54" high if reaching sideways or 15"-48" high if reaching forward. They should also be operable with a closed fist. Adjust tops of tables or counters to 28"-34" high, with knee spaces at least 27" high, 30" wide, and 19" deep.
- Adjust toilet seats to 17"-19" high and put grab bars 33"-36" high behind and on the side wall nearest to the toilet. The rims of bathroom sinks should be no higher than 34" and the faucets operable with a closed fist. Allow at least 29" from the floor to the bottom of the lavatory apron (excluding pipes). Mount mirrors with the bottom reflecting edge 40" high or lower.
- Use pushbutton phones located 48" high or less. Contact the phone company to add hearing aid compatible and volume control options. Install flashing lights to activate when the fire or smoke alarm is triggered.

Such improvements on new construction add very little (3-10 percent) to the total cost of a house. They permit those less able to remain in place longer, thus maintaining family ties and reducing special housing costs.