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Industry insights

Understanding the latest ADA/accessibility updates

Most integrators are familiar with the basic ADA standards, which have been in effect since 1991. They were revised in 1994 and remained largely unchanged until 2010. The 2010 ADA Standards for Accessible Design took effect in 2012.

Allegion asked Lori Greene, manager of codes and resources, to highlight some of the changes that occurred with the 2010 update and, more importantly, what those changes mean to the design of an opening.

#1: Operational force

The 2010 ADA standards included an unexpected change regarding the maximum allowable force to operate door hardware. Prior to the 2010 edition, no force limitation was mentioned with regard to the operation of hardware.

Key points:

- Door and gate hardware—handles, pulls, latches, locks and other operable parts on doors and gates—must comply with paragraph 309.4. This reference establishes a limit for the operational force of hardware.
- Operable parts (listed above) shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist.
- According to paragraph 309.4, the force required to activate operable parts shall be 5 pounds maximum.

Impact on design:

- This revision creates a conflict with existing codes and standards that include different limits for the operation of door hardware—particularly panic hardware, which is limited to 15 pounds of force by most codes and standards.
- The section of the ADA standards which addresses opening force still includes the statement that the 5-pound maximum opening force does not apply to the force required to retract the latches. The U.S. Access Board unofficially acknowledged that there was a conflict between the operational force limit and the opening force exclusion, but to date, the standards have not been modified.
- Despite the conflict, there are projects where the 5-pound limit is being enforced for both lever-operated hardware and panic hardware, and the 2013 California Building Code includes the 5-pound limit.

Greene's tip #1:

Consult your local code officials to determine the requirements for your project's jurisdiction, and whether the hardware must operate with 5 pounds of force. Verify with the hardware manufacturer (particularly panic hardware) whether products are available which operate with 5 pounds of force or less.

More info

#2: Actuators for low energy operators

The 2010 ADA Standards for Accessible Design (as well as the ICC A117.1 – Accessible and Usable Buildings and Facilities) references BHMA standards and requirements pertaining to actuators for automatic doors.

Key points:

- Clear floor space for a wheelchair must be provided adjacent to the actuator and beyond the arc of the door swing.
- The mounting height is variable, depending on the reach range associated with the location of the switch, but the range recommended by the ANSI/BHMA standards is acceptable for most applications.
- Actuators must not require tight grasping, pinching or twisting of the wrist to operate, and the operating force is limited to 5 pounds maximum.

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- Low energy operators must be actuated by a "knowing act," such as a push button, access control reader or pushing/pulling the door. Sensors that automatically open the door are not considered a knowing act.

Impact on design:

- If a sensor is used to actuate a low energy automatic door (instead of an actuator that requires a knowing act), the automatic door must meet the requirements of ANSI/BHMA A156.10, the accepted standard for power-operated pedestrian doors. This includes requirements for safety sensors or control mats and guide rails.
- If certain criteria are met, walls may be used in place of guide rails. When doors are installed across a corridor, guide rails are not required if the distance between the wall and the door in the 90 degree open position does not exceed 10 inches.

Greene's tip #2:

Guide rails are not feasible for many locations where low energy automatic operators are installed. To avoid the need for guide rails, low energy operators should be actuated by a knowing act switch rather than a sensor.

More info

#3: 10-inch flush bottom

The requirement for a 10-inch-high flush bottom rail on manual doors are now included in the ADA standards, whereas previously it was only a requirement of ICC A117.1 – Accessible and Usable Buildings and Facilities.

Key points:

- Swinging door and gate surfaces within 10 inches of the finish floor or ground (measured vertically) shall have a smooth surface on the push side extending the full width of the door or gate.
- Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 of an inch of the same plane as the other.
- Tempered glass doors with no vertical stiles and a tapered bottom rail do not have to meet the requirement for a 10-inch bottom rail, although they are still subject to the prohibition on projections.
- Sliding doors and doors that do not extend to within 10 inches of the floor are exempt from the flush bottom rail requirement.

Impact on design:

- The 10-inch-high space must have a smooth surface, so bottom rods and latches of surface-mounted vertical exit devices, kick-down and plunger holders, surface bolts, automatic door bottoms and full-height door pulls do not meet the intent of this requirement.
- If kick plates are added to create a wider bottom rail, the space between the top of the kick plate and the glass must be capped, and the joints between surfaces are limited to a 1/16 of an inch variation in plane.

Greene's tip #3:

Now that the standards are consistent, expect to see increased awareness and enforcement of this requirement. For existing surface-mounted vertical rod panic hardware, an extended latch guard that slopes gradually across the door and over the latch may be acceptable to the code official.

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#4: Stand-by power for auto operators

Manual doors require maneuvering clearance to allow someone using a wheelchair or other assistive device to open the door. Automatic doors are not typically subject to the maneuvering clearance requirements; so manual doors without proper maneuvering clearance are sometimes retrofitted with automatic operators to address the problem. The 2010 ADA Standards require stand-by power for automatic operators when the door does not have the proper maneuvering clearance on the egress side.

Key points:

- Power-assisted doors and gates should have the same maneuvering clearance as manual doors.
- Doors without standby power need the required maneuvering clearance on the egress side. Therefore, doors with standby power do not need the maneuvering clearance.

Impact on design:

- If an existing door serving an accessible means of egress does not have the required maneuvering clearance, and an auto operator is added to overcome that problem, the operator needs standby power unless the door stands open on power failure per the exception.

Greene's tip #4:

Fire-rated doors with automatic operators are required to be deactivated upon fire alarm, so an automatic operator with battery backup should not be used on a fire-rated door to overcome the maneuvering clearance problems.

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