

Public Seating

Smithsonian Institution Accessibility Guidelines

Seating must be provided in each exhibition. 50% of the seats must be accessible. Single-gallery exhibitions must have seating nearby, in a corridor or in an adjacent gallery space.

Provide accessible seating in gallery spaces.

For seating to be accessible, seats should be firm and between 430 mm (17 in.) and 510 mm (19 in.) above the floor. Chairs or benches should have both arm and back support. This support is essential for people who have mobility impairments: arms and backs offer people support points when lowering themselves into as well as when rising out of seats. Seat backs should be firm and have an upper edge of no less than 455 mm (18 in.) above the seat; arm heights should be roughly proportionate to the back heights.

Provide seats that are not tripping hazards or obstacles.

For people with low vision, seating is best located where it is not a tripping hazard and where it is clearly visible due to color contrast and good lighting. Benches should not be placed under text on walls. This presents an obstacle and a potential hazard to people who must get very close to text to read.

Seating cannot be a barrier to people with mobility impairments. It must not block passage between areas or block the clear floor space needed to operate controls or to use equipment.

Example: A bench cannot be placed near the latch side of door openings where people position themselves in order to open doors), below elevator buttons, or near water fountains.

Provide seating that can be used by people who use wheelchairs as well as by their companions.

Benches and fixed seating need at one end a minimum 760 mm (30 in.) by 1220 mm (48 in.) space to allow a person in a wheelchair to sit next to someone on the bench (see Fig. 31) or to transfer onto the seating itself.

Public Plaza Seating

http://www.nyc.gov/html/dcp/html/pops/plaza_standards.shtml#seating

The provision of abundant, well-designed, and comfortable seating is one of the most critical elements of public plaza design. Plaza designers should carefully consider the variety, dimensions, location, and configuration of seating with the intent to maximize opportunities for comfortable and convenient seating that emphasizes social interaction.

Variety: There are six types of seating that may be used to satisfy the seating requirements for public plazas: moveable seating, fixed individual seats, fixed benches, seat walls, planter ledges, and seating steps.



Movable seating



Fixed benches



Seat walls



Fixed individual seating



Planter ledges



Seating steps

All public plazas are required to provide two of these seating types, while plazas between 5,000 and 10,000 square feet are required to provide three types. Plazas greater than 10,000 square feet are required to provide moveable seating as one of the three required seating types.

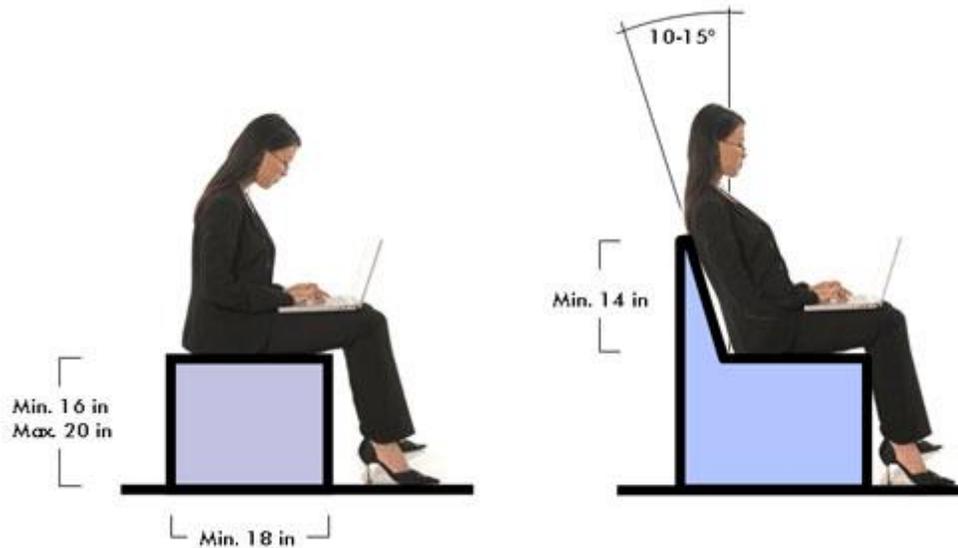
Social seating – seats that are located in close proximity to one another and in configurations that facilitate social interaction – are a basic seating arrangement that should be provided across all seating types wherever possible. Movable tables and chairs are the most flexible form of social seating, however angled and curved benches and groupings of fixed seats can achieve the same purpose.



Social seating

A substantial proportion of seats in a plaza should have backs to facilitate comfort and usability by people of all ages and abilities. To ensure sufficient variety in seating types in the public plaza, seating steps and walls are limited to no more than 15% of the total required seating in the public plaza.

Dimensions: Seating that is too narrow, too high, or too short inhibits the usability of a space and runs counter to the goal of providing an enjoyable and comfortable space for a variety of users. Seats are required to be at least 18 inches deep and between 16 and 20 inches in height.



Seats should generally be between 16 and 20 inches in height and 18 inches in depth. If backs are provided, they should be at least 14 inches high and reclined or contoured for comfort.

To allow for generous plantings, seating provided on planter ledges are required to be at least 22 inches deep. Seating steps can provide flexible seating – from simple perches to generous, amphitheater-style seating -- and are permitted to range between six and 20 inches in height.

Location: Many existing plazas locate seating deep within the plaza area. Such seating can provide a desirable sense of refuge from the city; however the lack of seating at the plaza entrance often results in a barren condition and an underutilized plaza. To ensure that adequate seating is provided throughout the public plaza, a portion of the required seating in the public plaza must be located within 15 feet of the sidewalk. The minimum amount of seating required in the sidewalk frontage is one linear foot of seating for every two linear feet of public plaza street frontage. To ensure that this seating is comfortable and engages the public by being oriented toward the street, 50% of such seating is required to have backs and 50% of the seats with backs are required to face the sidewalk. The 2009 text amendment enhanced the regulations for seating with backs to require that such seats would not be greater than 20 inches in depth. This revised provision is based upon the body's natural seating posture, thus ensuring that required seating is usable.



Seating provided within the sidewalk frontage of a plaza

Prohibitions: Deterrents to seating, such as spikes, rails, or deliberately uncomfortable materials or shapes, placed on surfaces that would otherwise be suitable for seating are prohibited within public plazas. These types of devices can be seen throughout existing plazas and compromise the usability and public nature of these spaces.



Prohibited seating deterrents

Devices incorporated into seating that are intended to prevent damage caused by skateboards and rollerblades are generally permitted. Such deterrents are required to be spaced at least 5 feet apart from one another, be constructed of high-quality materials that are integrated with the seating design, and should not inhibit seating.

BENCH DESIGN GUIDELINES

<http://www.pps.org/reference/movable-seating/>

The Seat

- To be comfortable, there should be a 95-105 degree angle between the seat and the back, and the seat should be between 2 and 10 degrees off of horizontal.
- The depth of the seat should be 12 to 18 inches for benches with backs and 30 inches for backless benches.
- A seat height of 18 inches is generally the most comfortable.
- The front edge of the seat should be curved rather than squared off.
- The most comfortable seating surface is wood, which is resilient and does not readily conduct heat or cold.
- Small bench slats (2 inches) spaced closely together and following a contoured form are generally more comfortable than larger slats (8 inches). However, in areas where vandalism is a factor a larger size (e.g., 3 inches x 8 inches) should be used.
- The length of the seat should allow for twenty-four inches per person. However, people will sit closer to each other if there is an armrest separating them.

The Back

- Seatbacks that slope back slightly and have a slight curve are the most comfortable.
- The height of the backrest should be 20 inches to provide support for people's backs and shoulders.
- Benches with no backs allow people to sit on both sides at the same time.

The Legs

- The legs should not extend out past the seat, otherwise people may trip on them. If a large, solid leg is used, a kickspace (3 inches minimum) under the seat is needed.

Armrests

- Armrests are useful both to help people to get out of the seat, and to divide a bench so that more people can fit along it. Segmenting the bench into sections through the use of armrests can provide a sense of privacy among groups as well as encourage people to sit closer together. The edge of the armrest should extend out to the edge of the seat, and it should have a firm, rounded gripping surface.

BENCHES

4.37 – Benches. <http://www.adaag.com/ada-accessibility-guidelines/index.php#4.37>

4.37.1 – General. Benches required to be accessible by [4.1](#) shall comply with 4.37.

4.37.2 – Clear Floor or Ground Space. Clear floor or ground space complying with [4.2.4](#) shall be provided and shall be positioned for parallel approach to a short end of a bench seat.

EXCEPTION: Clear floor or ground space required by 4.37.2 shall be permitted to be obstructed by readily removable seats in saunas and steam rooms.

4.37.3* – Size. Benches shall be fixed and shall have seats that are 20 inches (510 mm) minimum to 24 inches (610 mm) maximum in depth and 42 inches (1065 mm) minimum in length (see [Fig. 47](#)). [Appendix Note](#)

4.37.4 – Back Support. Benches shall have back support that is 42 inches (1065 mm) minimum in length and that extends from a point 2 inches (51 mm) maximum above the seat to a point 18 inches (455 mm) minimum above the seat (see [Fig. 48](#)).

4.37.5 – Seat Height. Bench seats shall be 17 inches (430 mm) minimum to 19 inches (485 mm) maximum above the floor or ground.

4.37.6 – Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 lbs. (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.