



Architects

Accessibility Requirements for Renovation Projects

Course Number: AIAPDH253

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PO Box 449 Pewaukee, WI 53072 (888) 564-9098

arch-support@edcet.com

Accessibility Requirements for Renovation Projects Final Exam

1. Which of the following cannot be found in Chapter 2 of the *ADA Standards*?
 - a. The elements of a building that need to be accessible
 - b. The required number of those elements that need to be accessible
 - c. Exceptions for making elements accessible
 - d. Specific height a kitchen work surface needs to be for accessibility

2. Which of the following are considered an alteration to a building?
 - a. Reroofing
 - b. Painting
 - c. Replacing a mechanical unit
 - d. None of the above

3. Alterations that are made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds what percentage?
 - a. 10%
 - b. 20%
 - c. 30%
 - d. 40%

4. Which of the following items are included in the path of travel when altering an area of a building containing a primary function?
 - a. Restrooms
 - b. Public telephones
 - c. Drinking fountains
 - d. All of the above

5. If a primary function room in a historic building is being altered, which of the following does NOT need to be done if it would destroy the historic significance?
 - a. Provide an accessible restroom.
 - b. Install an elevator to the 2nd floor.
 - c. Provide an accessible route to an accessible entrance.
 - d. All of the above.

6. Which of the following does not need to be accessible?
 - a. Construction job trailer
 - b. Mechanical equipment rooms
 - c. Diving platforms
 - d. All of the above

7. If there are a total of 235 guest rooms in a hotel, how many total rooms must have mobility features.
 - a. 3
 - b. 5
 - c. 7
 - d. 10

8. What is the maximum rise for a ramp with a 1:10 slope?
 - a. 3 inches
 - b. 6 inches
 - c. 30 inches
 - d. There is no limit.

9. What is the maximum height of a threshold being altered?
 - a. $\frac{1}{4}$ inch
 - b. $\frac{1}{2}$ inch
 - c. $\frac{3}{4}$ inch
 - d. 1 inch

10. How many checkout aisles must be accessible if there is 1 checkout aisle for Returns, 2 checkout aisles for Purchases, and 1 checkout aisle for Online Pickup?
 - a. 1
 - b. 2
 - c. 3
 - d. 4

Accessibility Requirements for Renovation Projects

The Americans with Disabilities Act (ADA) was signed into law in 1990. Even though that was more than three decades ago, many design professionals and owners still have questions about what needs to be accessible and when it needs to be accessible, especially when it comes to renovation projects. This course will review the general accessibility requirements for existing buildings and renovation projects and explain how they differ from those of new construction projects. It is based on the *2010 ADA Standards for Accessible Design* or *ADA Standards*. The *italic* numbers in parentheses are the referenced *ADA Standards* section numbers. All images are taken from the *2010 ADA Standards for Accessible Design* unless noted otherwise. A free downloadable version may be found at www.ada.gov. Remember that the Administrative Authority for local jurisdictions can modify the provisions and interpretations, so always check with the local governing authority for their specific requirements.

When trying to figure out what is required to comply with the *ADA Standards*, it is always a good idea to go to Chapter 2. It contains the scoping requirements and answers the following questions.

1. What elements of a building need to be accessible?
2. How many of those elements need to be accessible?
3. Are there any exceptions to those requirements?

The general answer to the first question can be found in Section 201.1.

201.1 Scope. *All areas of newly designed and newly constructed buildings and facilities and altered portions of existing buildings and facilities shall comply with these requirements.*

What constitutes an alteration? *ADA Standards* defines an alteration as ‘a change to a building or facility that affects or could affect the usability of the building or facility or portion thereof. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, plan reconfiguration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.’ (106.5)

As stated in 201.1, all areas of a facility must be accessible. However, there are exceptions and exemptions. The scoping requirements in Chapter 2 may also limit the number of elements that need to be accessible if there are multiple elements. Temporary buildings are NOT exempt (201.3). Additions to buildings need to follow the accessibility requirements for new buildings. (202.2) If an element or space is being altered, it must comply unless one of three exceptions can be applied. (202.3)

1. If the altered element or space does not contain a primary function area, the route to the altered element or space does not need to be made accessible unless it is being altered, as well.
2. If compliance is technically infeasible in alterations, compliance is only required to the maximum extent feasible.
3. Residential dwelling units do not have to comply unless required elsewhere by the ADA or Section 504 of the Rehabilitation Act of 1973.

Some other caveats include that if an alteration can decrease the accessibility of a building, the alteration is prohibited. (202.3.1) For example, if a renovation includes demolishing the only accessible restrooms in the building and leaving a set of inaccessible ones, it is prohibited. However, alterations

should not create a more significant accessibility requirement than what is required for a new building. Suppose you are renovating medical care patient rooms. They do not need to be accessible if the required number of accessible medical care patient rooms were provided elsewhere.

Path of Travel

Section 202.4 has the most considerable impact on renovation projects because it has the 'path of travel' clause. If renovating an area that includes a primary function for the building, these elements must also be made accessible, if not already accessible: restrooms, public telephones, drinking fountains, and the path of travel to the altered area from site arrival points.

202.4 Alterations Affecting Primary Function Areas. In addition to the requirements of 202.3, an alteration that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area, including the restrooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, unless such alterations are disproportionate to the overall alterations in terms of cost and scope as determined under criteria established by the Attorney General. In existing transportation facilities, an area of primary function shall be as defined under regulations published by the Secretary of the Department of Transportation or the Attorney General.

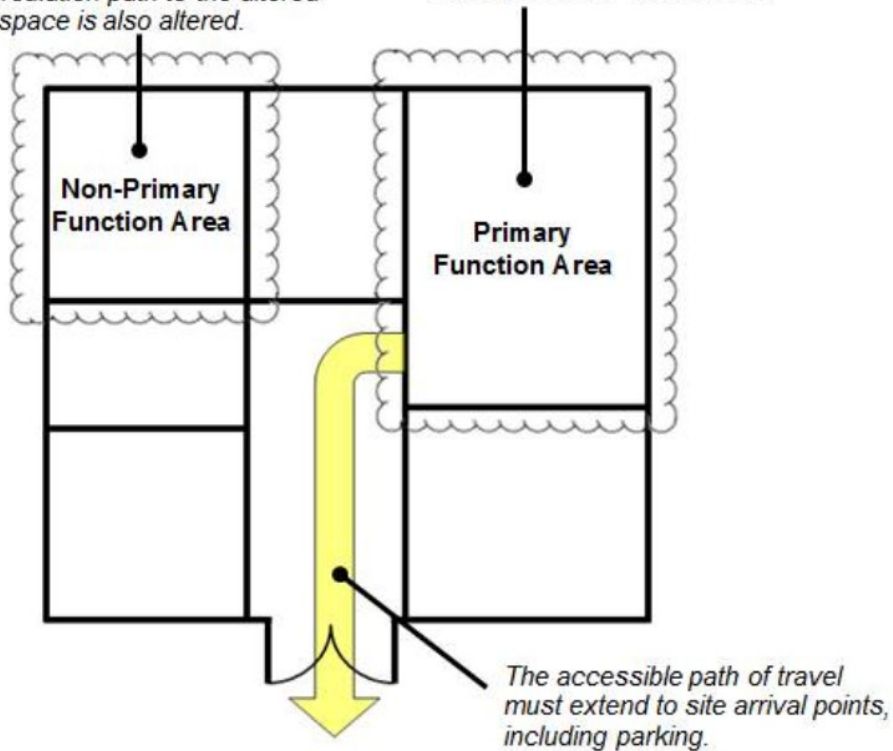
EXCEPTION: Residential dwelling units shall not be required to comply with 202.4.

An advisory for Section 202.4 clarifies that a primary function area is 'an area of a building or facility containing a major activity for which the building or facility is intended.' Examples include bank lobbies, teller areas, and walk-in safes inside banks. The spaces NOT considered primary function areas include mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors, or restrooms. However, there are always exceptions. Restrooms at a highway rest stop could be considered a primary function area.

Residential dwelling units are an exception to the path of travel clause. (202.4) Residential dwelling units are defined as 'a unit intended to be used as a residence, that is primarily long term in nature. Residential dwelling units do not include transient lodging, inpatient medical care, licensed long-term care, and detention or correctional facilities.' (106.5)

Altered elements and spaces are required to comply. In areas not containing a primary function, an accessible route to an altered element or space is required only when the circulation path to the altered element or space is also altered.

Alterations made to areas containing a primary function also require an accessible path of travel to the extent that it is not "disproportionate" to the cost.



Application of the Standards in Alterations

(Graphic from the *United States Access Board Guide to the ADA Standards*)

Disproportionality

The Title II regulations at 28 CFR 35.151 and the Title III regulations at 28 CFR part 36 state that alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area. If the cost of the alterations required to make the path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, the path of travel must be made accessible to the extent that it can be made accessible without incurring disproportionate costs.

Accessible elements must be prioritized in this order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible telephones
5. Accessible drinking fountains
6. When possible, additional accessible elements such as parking, storage, and alarms.

When determining disproportionality, alterations that have occurred within the past three years to primary function areas on the path of travel must be considered to ensure that the obligation to provide an accessible path of travel is not evaded by performing a series of smaller alterations.

Part 1 Review Questions

1. Which of the following statements is true?
 - a. Temporary buildings are exempt from the accessibility requirements.
 - b. Temporary buildings are NOT exempt from the accessibility requirements.
 - c. Historic buildings are exempt from the accessibility requirements.
 - d. Amusement rides are exempt from the accessibility requirements.

2. Which of the following is not considered a primary function area?
 - a. Classroom in a school
 - b. Kitchen at a restaurant
 - c. Employee lounge at a retail establishment
 - d. Ticket counter at a movie theater

3. If an employee work area is being altered, which of the following statements is false?
 - a. It only needs to be accessible if someone is hired with a disability.
 - b. There must be an accessible route to the work area.
 - c. The entrance must be accessible with adequate maneuvering clearances on the exterior of the room.
 - d. A 30-inch by 48-inch wheelchair space must be provided in the work area.

Historic Buildings

The ADA Standards do not exempt historic buildings and facilities from the 'path of travel' clause. However, if compliance would harm the historic significance of the building or facility, the State Historic Officer or Advisory Council on Historic Preservations can allow exceptions to qualified historic buildings or facilities for the three 'path of travel' elements. (202.5) In order for a building to qualify as historic, it must be eligible for listing in the National Register of Historic Places under the National Historic Preservation Act (16 U.S. C. 470 et seq.) or be designated as historic under the State or local law. (*Title III Subpart D of 28 Part 36*)

There are various locations in the ADA Standards that provide specific exceptions for historic buildings. If providing an elevator, ramp, or lift would harm the historic significance of the building, it is not required. (206.2.3 *Exception 7*.) No more than one accessible route is required to an accessible entrance. (206.2, *Exception 1*) No more than one accessible entrance is required. (206.4, *Exception 2*) Only one toilet room for each sex or one unisex toilet room is required. (213.2, *Exception 2*)

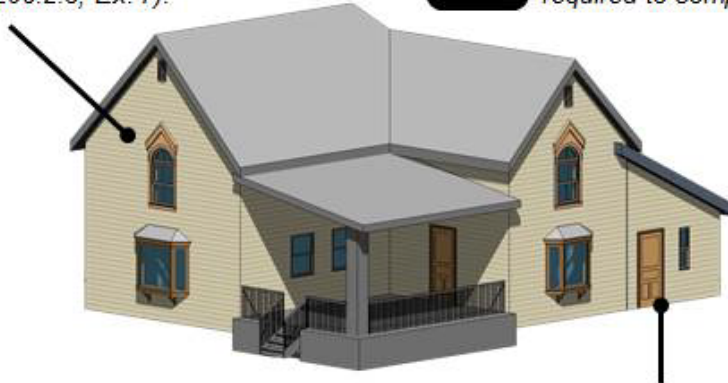
Exceptions for Qualified Historic Facilities

(where compliance would threaten or destroy a facility's historic significance)

Vertical access to stories above or below the accessible story is not required (§206.2.3, Ex. 7).



At least 1 unisex **toilet room** or 1 men's and 1 women's room is required to comply (§213.2, Ex. 2).



At least 1 **accessible route** is required from a site arrival point to an accessible entrance (§206.2.1, Ex. 1).

At least 1 **public entrance** is required to be accessible (if that would also threaten the historic significance, access can be provided to a non-public entrance but a notification or remote monitoring system is required for locked entrances) (§206.4, Ex. 2).

(Graphic from the United States Access Board Guide to the ADA Standards)

Technical Infeasibility

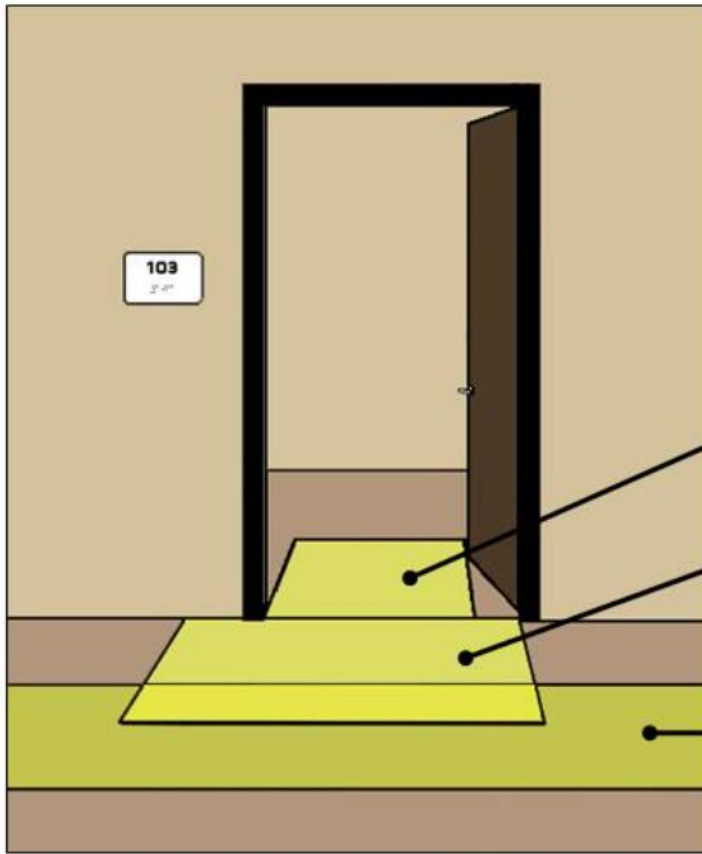
Technical infeasibility was listed earlier as one of the three reasons an alteration may not need to be accessible. (202.3) It is defined as 'something that has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member that is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features that are in full and strict compliance with the minimum requirements.' (106.2) When technical infeasibility may prevent specific elements from being accessible, compliance is still required on the other elements that are achievable.

An example of technical infeasibility includes not being able to combine two toilet stalls to create an accessible stall because this would violate the plumbing code's required minimum fixture count. Another example would be trying to meet the accessible slope requirements on an existing developed site with steep terrain. Needing to demolish a load-bearing wall to widen a toilet room to create a turning space could also qualify for the infeasibility exception.

General Exceptions

There are thirteen general exceptions to the *ADA Standards* for all projects (new construction and renovations). Structures and sites directly associated with the actual processes of construction (i.e. scaffolding, bridging, hoists, materials storage, construction trailers, and portable toilets units for the construction crew) are not required to be accessible. (203.2) Areas raised for security, life safety, or fire safety are also exempt. (203.3) Spaces limited to employees and accessed only by ladders, catwalks, crawl spaces, or narrow passageways do not need to comply. (203.4) Machinery spaces (i.e., elevator pits, mechanical equipment rooms, electrical rooms, etc.), single-occupant structures, detention and correctional facilities, and common-use areas in residential facilities that serve non-accessible dwelling units are also on the list. (203.5, 203.6, 203.7, 203.8)

Employee work areas do not need to be fully accessible, but this can be a grey area among employers. (203.9) Under the ADA, reasonable accommodations must be provided to employees with disabilities. Employers cannot discriminate and decide not to hire a qualified individual because of their disability. If an employee's work area is being renovated/constructed, it is a good idea to make it accessible to prevent more costly retrofits if a current employee becomes temporarily or permanently disabled. The required accessible components of employee work areas include common-use circulation paths in most work areas of at least 1,000 square feet (206.2.8), an accessible means of egress (207.1), wiring for visible alarms in areas served by audible alarms (215.3), and access to approach, enter, and exit the work area. (203.9) *The United States Access Board Guide to the ADA Standards* clarifies that access for 'approach, entry, and exit' requires a connecting accessible route to the work area and a compliant entrance, including entry doors or gates, plus wheelchair space (30 inches x 48 inches) in the work area. The employee work area exception only applies to the areas where work is performed by employees. It does not apply to employee restrooms, locker rooms, break rooms, cafeterias, and parking, so those features must be accessible.



Wiring must be designed to allow later installation of visible alarms in work areas served by audible alarms.

Wheelchair space (30" x 48" min.) in the work area

Accessible entry door/ gate (including maneuvering clearances on the exterior)

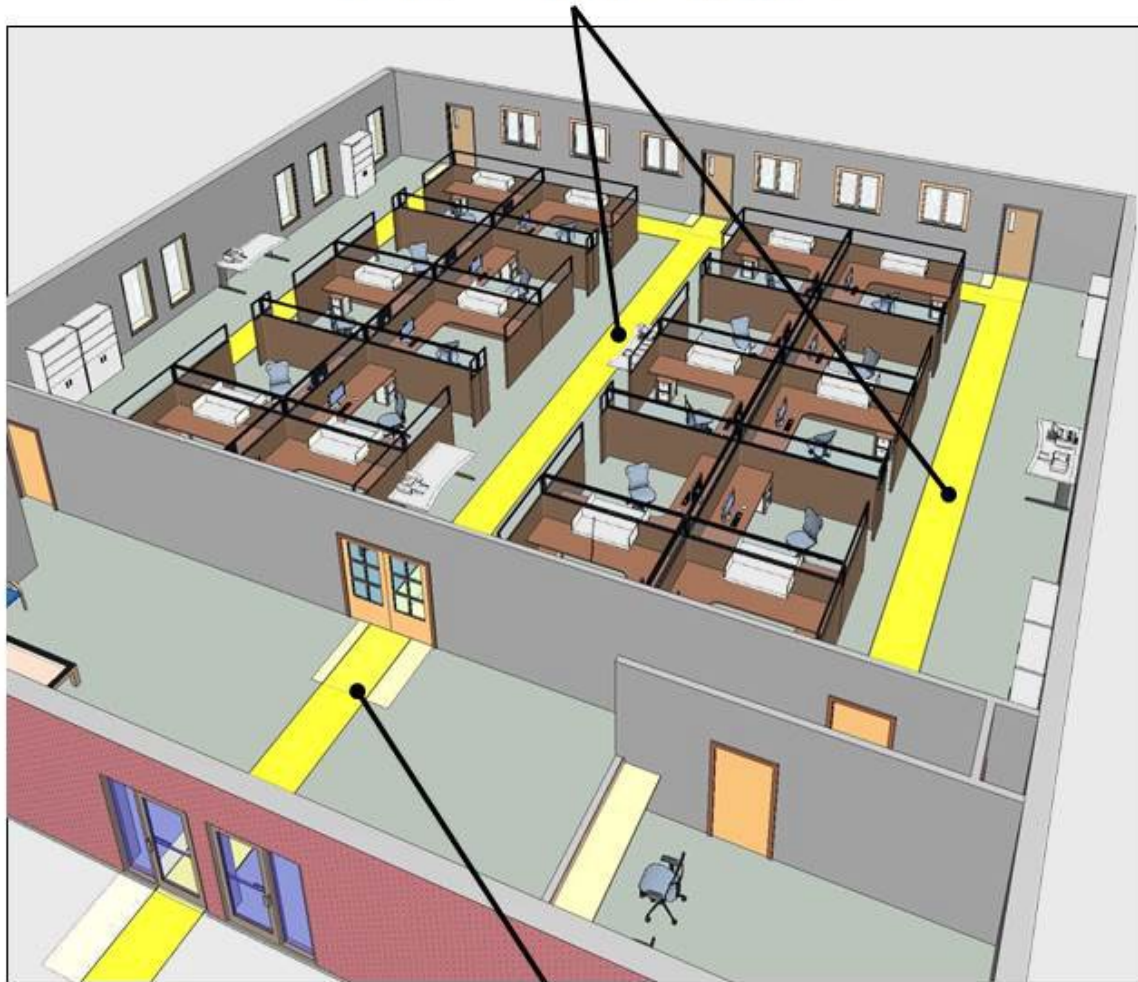
Connecting accessible route and accessible means of egress

Note: Signs and other elements provided outside the work area must comply with the requirements for those elements.

Access for Approach, Entry, and Exit

(Graphic from the *United States Access Board Guide to the ADA Standards*)

Common use circulation paths in work areas of 1,000 sq. ft. or more must meet requirements for accessible routes, including clear width and changes in level.



Doors and gates that are part of common use circulation paths, including those leading to and from the work area, must fully comply.

Common Use Circulation Paths

(Graphic from the *United States Access Board Guide to the ADA Standards*)

The final five exceptions for accessibility include raised structures only used for refereeing, judging, or scoring a sport, water slides, animal containment areas, raised boxing/wrestling rings, and raised diving boards/platforms. Each of these exceptions listed does not need to comply with the *ADA Standards* or be on an accessible route. (203.10-203.14)

Special Provisions for Alterations

There are provisions specific to alterations that are sprinkled throughout the *ADA Standards*. They are detailed below.

Multi-Story Buildings and Facilities

If an escalator or set of stairs is being constructed in an existing building where they did not exist before, an accessible route must also be provided unless one of these exceptions applies. (206.2.3)

1. If it is a private building/facility with less than three stories or less than 3,000 square feet per story, an accessible route is not required as long as the building/facility is NOT a shopping center, health care provider office, a terminal, depot or other station used for public transportation, or an airport passenger terminal.
2. If a public building is two stories, one of the stories does not require an accessible route to it if the occupant load is five or fewer people.
3. If the cells at detention/correctional facilities that are required to have mobility features are on an accessible route and the public areas are on an accessible route, the other levels do not need to be on an accessible route.
4. If the residential dwelling units requiring mobility features and the public use areas are on an accessible route, the other levels do not need to be on an accessible route.
5. If the transient lodging guest rooms that are required to have mobility features are on an accessible route and can accommodate at least two people, the other levels do not need to be on an accessible route.
6. The cab in an air traffic control tower and the floor immediately below the cab do not need to be on an accessible route.
7. As mentioned earlier, qualified historic buildings do not need accessible routes to floors beyond the accessible story.

When altering an element of an existing elevator, the element must be modified to be accessible if it is not already accessible. If the altered elevator is in a bank of multiple elevators that respond to the same hall control, all of them must be modified similarly. (206.6.1) Where existing elevators are not fully accessible, the elevators that are accessible must be identified with signs containing the International Symbol of Accessibility. (216.7)

Platform lifts can be installed to provide an accessible route in an existing building or facility. They are also permitted to provide an accessible route when the existing exterior site constraints would make constructing a ramp or elevator infeasible. (206.7)

Stairs that connect levels that are already connected by an accessible route do not have to comply fully with the accessibility requirements for stairs. Only the handrails must comply when the stairs are altered. (210.1, *Exception 2*) When altered, they must be provided on both sides of the stairs, be continuous and unobstructed between flights, be located between 34 and 38 inches above the stair nosings, maintain 1-1/2 inches of clearance from the adjacent surface/wall, have an outside diameter between 1-1/4 inches and 2 inches, be free of abrasive elements, not rotate within their fittings, and extend 12 inches beyond the top riser and one tread depth beyond the bottom riser. (505) Full extensions of the handrails are not required if they would be hazardous to the existing layout of the space. (505.10, *Exception 3.*)

Restaurants and Cafeterias

For new construction, accessible routes are required to all dining areas, even if they are raised or sunken or if they are an outdoor area. That is not true for alterations if the same services and décor are provided in an accessible location. (206.2.5, *Exception 2*)

Entrances

Every entrance of a building does not need to be accessible. In new construction, only 60 percent of public building entrances must be accessible. (206.4.1) For entrance alteration projects, the entrance does not have to be made accessible unless there is not an accessible public entrance that is on an accessible route elsewhere or if it is the entrance serving a primary function space that is also being renovated. (206.4) Please note that if every entrance is not accessible, signs that indicate the location of the nearest accessible entrance are required. The accessible entrances must also have a sign with the International Symbol of Accessibility on them. (216.6)

As mentioned earlier, qualified historic buildings only need one accessible entrance. If the public entrance cannot comply in a historic building, an alternate entrance can be provided if it remains unlocked or has a notification system or remote monitoring. (206.4, *Exception 2*)

Transportation Facilities

Existing direct connections in key stations and existing intercity rail stations are not required to meet the accessibility requirements for doors. (206.4.4.2, *Exception*) However, if the Code of Federal Regulations requires any key station or existing intercity rail station to be altered, then at least one accessible door/entrance must be provided. (206.4.4.3)

Existing intercity rail stations as well as new and altered fixed guideway stations in rapid rail, light rail, commuter rail, intercity rail, high speed rail, and other fixed guideway systems must have the accessible elements listed below. (218.2)

1. The rail platforms cannot exceed a slope of 1:48 in any direction. If the platforms serve vehicles that operate on an existing track or roadway, the slope of the platform directly next to the track can be the same as the slope of the existing track or roadway. (810.5.1)
2. Detectable warnings are required at the platform boarding edges if platform screens or guards do not protect them. (810.5.2)
3. Low-level platforms must be constructed at 8 inches above the top of the rail unless vehicles are boarded from sidewalks or at street level. (810.5.3)
4. Accessible signs for entrances, routes/destinations, and station names are required. (810.6)
5. If public address systems provide audible information, the same information has to be provided in a visual format. (810.7)
6. Clocks in public locations must be easy to read, have contrasting backgrounds, and meet all of the requirements for Visual Characters of new signs as outlined in section 703.5 (case, style, character proportions, character height, height from finish floor or ground, stroke thickness, character spacing, and line spacing.)
7. Escalators are required to have a clear width of 32 inches unless they are in existing key stations.

8. Sometimes, boarding platforms cross tracks. If they do, they must be on accessible routes. However, the openings for wheel flanges are allowed to be up to 2-1/2 inches wide. (810.10)

Figure 810.10



(Exception) Track Crossings

Toilet Rooms and Bathing Rooms

A unisex restroom can be substituted for altering existing non-compliant restrooms where it is technically infeasible to make the existing restrooms accessible. The unisex restroom must be located on the same floor and in the same area as the existing restrooms. (213.2, *Exception 1*) If the existing restrooms are not accessible, signs must be posted that show where the nearest accessible restrooms are located. The accessible restrooms must have signs that have the International Symbol of Accessibility on them. (216.8)

In historic buildings that meet the qualifications, one restroom for each sex or one unisex restroom can be provided. (213.2, *Exception 2*)

Fire Alarm Systems

In new construction, fire alarm systems must have audible and visible alarms. In existing facilities, visible alarms are not required. If a fire alarm system in an existing building is upgraded or replaced, visible alarms must be added at that time. (215.1, *Exception*)

Dressing, Fitting, and Locker Rooms

At least 5 percent of dressing rooms, fitting rooms, and locker rooms must be accessible. For alterations, only one room for each sex on each level must be accessible if it is technically infeasible to meet the standards for new construction. If only unisex rooms are designed, only a single accessible unisex room on each floor needs to be provided. (222.1)

Medical Care and Long-Term Care Facilities

When altering or adding sleeping rooms to a hospital, rehabilitation facility, psychiatric facility, or detoxification facility, 10 percent of the rooms being altered must have mobility features. If the facility being altered is specialized in treating conditions that affect mobility, 100 percent of the rooms being altered must have mobility features. For licensed long-term care facilities, 50 percent of each type of resident sleeping room must have mobility features. If the existing facility already has the required number of rooms with mobility features elsewhere, the rooms being altered do not need mobility features. (223.1.1)

Transient Lodging Guest Rooms

Transient lodging is defined as “a building or facility containing one or more guest rooms for sleeping that provide accommodations that are primarily short-term in nature. Transient lodging does not include residential dwelling units intended to be used as a residence, inpatient medical care facilities, licensed long-term care facilities, detention or correctional facilities, or private buildings or facilities that contain not more than five rooms for rent or hire and that are actually occupied by the proprietor as the residence of such proprietor.” (106.5) So, hotels, motels, boarding houses, and bed and breakfast facilities can be considered as transient lodging.

The clear width of every guest room door in every transient lodging facility must be 32 inches when the door is open 90 degrees. There are specific numbers of guest rooms that are required to have mobility features. (See Table 224.2) Those rooms must be dispersed throughout the various classes and types of guest rooms. (224.5) 5 percent of beds are required to have a 30-inch by 48-inch clear floor space in guest rooms with more than 25 beds. Some of the guest rooms must have mobility features. (Table 224.4) When guest rooms are being altered or added, only the guest rooms in the project need to be considered in the calculations for how many need to have the accessibility features if the required amount for the entire facility has not already been provided elsewhere. (223.1.1)

Table 224.2 Guest Rooms with Mobility Features

Total Number of Guest Rooms Provided	Minimum Number of Required Rooms Without Roll-in Showers	Minimum Number of Required Rooms With Roll-in Showers	Total Number of Required Rooms
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1000	2 percent of total	1 percent of total	3 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000	10, plus 1 for each 100, or fraction thereof, over 1000	30, plus 2 for each 100, or fraction thereof, over 1000

Table 224.4 Guest Rooms with Communication Features

Total Number of Guest Rooms Provided	Minimum Number of Required Guest Rooms With Communication Features
2 to 25	2
26 to 50	4
51 to 75	7
76 to 100	9
101 to 150	12
151 to 200	14
201 to 300	17
301 to 400	20
401 to 500	22
501 to 1000	5 percent of total
1001 and over	50, plus 3 for each 100 over 1000

Detention Facilities and Correctional Facilities

Alterations to general holding cells do not need to be accessible unless the Attorney General requires it. (232.2) As with the general holding cells, alterations to special cells used for orientation, protective custody, administrative or disciplinary detention or segregation, detoxification, and medical isolation are not required to be accessible unless the Attorney General requires it. (232.3)

Residential Dwelling Units Not Subject to HUD Section 504

When increasing the number of residential dwelling units by adding onto a building, 5 percent must have mobility features, and 2 percent must have communication features unless the total number of units required to have mobility/communication features in the facility has already been provided in the existing units. (233.3.3)

The same is true for units being altered. If the facility has not provided the total number of units required to have mobility/communication features, the altered units must provide them until the required numbers are met. If it is not technically feasible to provide the mobility and/or communication features in the newly altered units, different comparable units must be altered or constructed to provide them at the time of the alterations. (233.3.4)

When alterations are being made to a vacant facility with more than 15 residential dwelling units, 5 percent must have mobility features and be on an accessible route. 2 percent must have communication features. (233.3.4.1)

If a bathroom or a kitchen is being substantially altered in a single residential dwelling unit along with one other room, the alterations must include mobility features if the required number of units with mobility features is not provided elsewhere in the facility and if the facility has more than 15 units. It must also be on an accessible route. (233.3.4.2)

Amusement Rides

If existing amusement rides' loading and unloading areas are being newly designed and constructed, they must contain a turning space. (234.4.1)

If structural or operational features of an amusement ride are altered so that the ride performs differently than initially designed, it must be constructed with a wheelchair space, a seat that allows for wheelchair transfer, or a transfer device unless one of these three exceptions apply. (234.3)

1. The ride is controlled or operated by the rider.
2. It is designed primarily for children.
3. It does not provide seats.

The queues and waiting line entries must have a sign identifying the type of access provided. If the accessible loading area is not the same as the loading area for the general public, signs must be displayed showing where the accessible loading area is located. (216.12)

Golf Courses

If multiple teeing grounds are provided for a hole at new golf courses, the forward teeing ground must be designed and constructed so that a golf cart can enter and exit it. This requirement does not apply to existing golf courses if the terrain makes it infeasible. (238.2.1)

Play Areas

When relocating existing play components to create safe use zones without altering the ground surface, the play components do not need to be on an accessible route or have the required turning and clear floor spaces that are required for new play components. If play components are being altered without altering the ground surface, the ground surface does not need to be made accessible. (240.1) If a play area is constructed in phases, each addition must have the required accessible elements for that phase. (See Table 240.2.1.2) Upon completion of the play area, the entire play area must have the required accessible elements as a whole. (240)

Table 240.2.1.2 Number and Types of Ground Level Play Components Required to be on Accessible Routes

Number of Elevated Play Components Provided	Minimum Number of Ground Level Play Components Required to be on an Accessible Route	Minimum Number of Different Types of Ground Level Play Components Required to be on an Accessible Route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
26 and over	8, plus 1 for each additional 3, or fraction thereof, over 25	5

Fuel Dispensers

When fuel dispensers are installed on existing curbs, the operable parts are allowed to be 54 inches maximum above the ground rather than 48 inches maximum. (308.3)

Ramps

The ramps for existing sites, buildings, and facilities can have slopes greater than 1:12 if necessary due to space limitations. Slopes up to 1:8 are allowed as long as they do not exceed the limits shown in Table 405.2. (405.2)

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities

Slope¹	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

1. A slope steeper than 1:8 is prohibited.

Landings with a clear width of 36 inches minimum are required at the tops of curb ramps. For an alteration project, curb ramp flares not steeper than 1:12 must be provided if there is no landing at the top of the curb ramp. (406.4)

Doors

For new construction, the maximum height of a threshold is ½ inch. For existing or altered thresholds, the maximum height is ¾ inch. Beveled edges on each side with slopes no more than 1:2 are required. (404.2.5) At shower doors, a 2-inch threshold is allowed for roll-in showers if a ½-inch threshold would disturb the structural reinforcement of the floor slab. (608.7)

The clear width of the doors required to be accessible must be 32 inches. Projections are not allowed into the required clear opening width lower than 34 inches above the floor. In alterations, a 5/8-inch projection is allowed for the latch side stop.

Typically, operable parts on doors and gates must be between 34 and 48 inches above the ground. However, existing locks can be located in any location at existing glazed doors that do not have stiles, existing overhead rolling doors or grilles, and other doors that have locks activated only at the top and bottom rail. (404.2.7)

Swinging doors and gates are required to have smooth surfaces within 10 inches of the ground on the push side of the doors/gates. If any added kickplates are capped, existing doors and gates can remain in place without the 10 inches of smooth surface. (404.2.10)

Elevators

There are several exceptions for elevator buttons and signals at landings for existing buildings. The call buttons may be recessed instead of being raised or flush. The height of the call buttons and keypads above the ground can be as high as 54 inches instead of 48 inches. The size of the call buttons does not need to be at least ¾ inches wide. The call buttons do not need visible signals to indicate when each call is registered and when each call is answered. A visible and audible signal indicating the direction of car travel is not required at existing elevators. If visible signals exist, they do not have to meet the size and height installation requirements for new elevators. The audible signals at existing elevators do not have to meet the frequency and dB range. (407.2)

Additional exceptions for existing elevators include allowing manually operated hoistway doors (407.3.2), not requiring reopening devices (407.3.3), allowing narrower doors with openings of only 32 inches, and allowing smaller car dimensions with a clear floor area of only 16 square feet as long as the depth is at least 54 inches and the width is at least 36 inches. (407.4.1) For LULA elevators, the car minimum dimensions are the same (36 inches for width and 54 inches for depth), but the minimum required area is 15 square feet. (408.4.1)

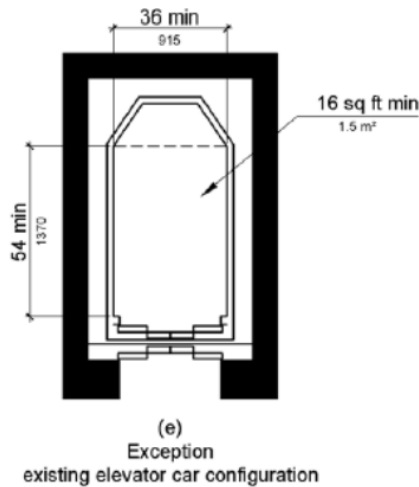


Figure 407.4.1 Elevator Car Dimensions

(Image is from the *ADA Standards*.)

As with call buttons on the landings, there are exceptions for existing elevator controls inside the car. The car control buttons with flooring designations can be located at 54 inches above the ground rather than 48 inches. The call buttons can be recessed. (407.4.6) If a new operating panel that meets the accessibility requirements is provided, the existing one does not need to be accessible. If the tactile markings cannot be placed to the left of the control buttons at existing operating panels due to space limitations, they can simply be added as close as possible. (404.4.7)

Courtrooms

When making alterations to a courtroom, the 30-inch by 48-inch clear floor space can be located outside of raised jury boxes or witness stands if installing a ramp or platform lift to the raised jury boxes or witness stands creates a hazard by limiting or projecting into the required egress widths.

Sales and Service Counters

There are a specific number of check-out aisles that are required to be accessible. (Table 227.2) Check-out aisles for each function must be considered separately. When altering check-out aisles, at least one of each function must be accessible until the required numbers are met. (227.2.1)

Table 227.2 Check-Out Aisles

Number of Check-Out Aisles of Each Function	Minimum Number of Check-Out Aisles of Each Function Required to Comply with 904.3
1 to 4	1
5 to 8	2
9 to 15	3
16 and over	3, plus 20 percent of additional aisles

In alterations, the required length of the accessible part of service counters can be 24 inches instead of 36 inches if providing the 36-inch length would cause a reduction in the number of workstations or mailboxes. A 30-inch by 48-inch clear floor space needs to be centered on the 24-inch accessible portion of the counter that is no higher than 36 inches above the floor. (904.4)

Summary

The accessibility requirements for a renovation or alteration are determined by a number of things. The primary factors include the scope of work and whether or not the alteration/renovation includes a primary function area. If a space or element is altered, it must comply with the same standards as new construction unless it is technically infeasible. However, compliance is required to the maximum extent that is feasible. There are a number of exceptions that were written into the *Standards* to address common challenges among alterations (i.e. not needing to modify a set of stairs if there is an accessible route provided elsewhere, not having to relocate existing locks on doors, etc.) There are also exceptions for historic buildings when compliance could threaten or destroy the historic significance.

If renovations or alterations are made to an area that contains a major activity for which the building is intended, the path of travel from the site arrival points to the area of the alterations/renovations as well as the restrooms, telephones, and drinking fountains serving those areas must be made accessible up to the extent it is not more than 20 percent the total cost of the renovations. If the path of travel elements cannot be made fully accessible due to the expense, the elements to be made accessible must be prioritized in this order: an accessible entrance, an accessible route to the altered area, at least one accessible restroom for each sex or a single unisex restroom, accessible telephones, and accessible drinking fountains.

Part 2 Review Questions

4. Which of the following is true?
 - a. An accessible unisex restroom can be substituted for altering existing non-compliant restrooms where it is technically infeasible to make the existing restrooms accessible.
 - b. Accessible restrooms do not have to be provided in historic buildings.
 - c. If combining two toilet compartments to make one accessible toilet compartment would reduce the number of fixtures to below the minimum number of required fixtures per the plumbing code, it should be done anyway.
 - d. Only one accessible restroom of each sex is required in each building.

5. For an existing building, which of the following is true?
- a. The buttons may be recessed.
 - b. The buttons may be raised.
 - c. The buttons may be flush.
 - d. All of the above.

About the Author

Jodie Ellis received her Bachelor of Architecture degree from Texas Tech University in 2000 and went on to become a licensed architect in the State of Texas. Most of her professional career has been spent designing and managing the construction of educational projects. Ellis joined Texas Tech Operations Division in 2017 as an architect and became the Architectural Manager in 2018. Prior to working at Texas Tech, she spent seven years working in the Facilities Planning and Construction department for another state college and time working in a few architectural firms throughout the country. She is a member of the American Institute of Architects and is a Registered Accessibility Specialist for the State of Texas.

Review Question Answers

1. Which of the following statements is true?

- a. Temporary buildings are exempt from the accessibility requirements.
- b. Temporary buildings are NOT exempt from the accessibility requirements.**
- c. Historic buildings are exempt from the accessibility requirements.
- d. Amusement rides are exempt from the accessibility requirements.

B is the correct answer, According to 201.3.

- 2. Which of the following is not considered a primary function area?
 - a. Classroom in a school
 - b. Kitchen at a restaurant
 - c. Employee lounge at a retail establishment**
 - d. Ticket counter at a movie theater

C is the correct answer. The employee lounge is not an area of the building that contains a major activity for which the building was intended.

- 3. If an employee work area is being altered, which of the following statements is false?
 - a. It only needs to be accessible if someone is hired with a disability.**
 - b. There must be an accessible route to the work area.
 - c. The entrance must be accessible with adequate maneuvering clearances on the exterior of the room.
 - d. A 30-inch by 48-inch wheelchair space must be provided in the work area.

A is the correct answer. Additional accommodations may need to be made if someone is hired with a disability. At a minimum, work areas must be designed so that they can be approached, entered, and exited. Fire alarms must have the wiring to allow for later installation of visible alarms if they are served by audible alarms.

- 4. Which of the following is true?
 - a. An accessible unisex restroom can be substituted for altering existing non-compliant restrooms where it is technically infeasible to make the existing restrooms accessible.**
 - b. Accessible restrooms do not have to be provided in historic buildings.
 - c. If combining two toilet compartments to make one accessible toilet compartment would reduce the number of fixtures to below the minimum number of required fixtures per the plumbing code, it should be done anyway.
 - d. Only one accessible restroom of each sex is required in each building.

A is the correct answer. Section 213.2 provides an exception that allows a unisex restroom to be substituted where it is technically infeasible to make the existing restrooms accessible. B is false because accessible restrooms are required in historic buildings. C is false because it could be considered as technically infeasible. D is false because unless there is a specific exception in the *ADA Standards*, every restroom must be accessible.

- 5. For an existing building, which of the following is true?
 - a. The buttons may be recessed.
 - b. The buttons may be raised.
 - c. The buttons may be flush.
 - d. All of the above.**

D is the correct answer. For an existing building, there is an exception in Section 407.2 allowing existing elevator buttons to be recessed. So, they may be recessed in addition to being raised or flush.

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How could these courses be improved?

What other topics would be of interest?

Additional Comments:
