

2012 IBC Accessible Means of Egress

2012 IBC Accessible Means of Egress

Based on the 2012 International Building Code



Accreditation



- The International Code Council has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET).
 - As a result of their Authorized Provider accreditation status, ICC is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.
- You will obtain full CEUs for this course, if you actively participate in the training activities and stay for the entire session. Evidence of this will be the sign out sheet.



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Description

- The participant will be able to apply the accessible means of egress provisions of Section 1007 of the 2012 IBC, as well as other related requirements.



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Objectives

- Upon completion, participants will be better able to:
 1. Understand the relationship of accessible means of egress to general means of egress.
 2. Determine where accessible means of egress is required.
 3. Identify those components and elements considered as accessible means of egress.
 4. Identify special features of accessible means of egress components.
 5. Understand the relationship of IBC accessible means of egress provisions to requirements of the ADA Standards for Accessible Design – 2010.



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Course Overview

- Module 1 – Scope and Definitions
- Module 2 – Locations Where Required
- Module 3 – Building Components
- Module 4 – Specific Features and Facilities
- Module 5 – Relationship with *ADA Standards for Accessible Design*



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Module 1

Scope and Definitions



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Means of Egress Section 1001.1

- Buildings, as well as portions of buildings, must be provided with a means of egress system as required by IBC Chapter 10.
- The provisions control the design, construction and arrangement of means of egress components.
- Accessible means of egress are further addressed through specific provisions in Section 1007.



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Definitions Section 202

- A means of egress is “a continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way.”
- An accessible means of egress is “a continuous and unobstructed way of egress travel from any accessible point in a building or facility to a public way.”



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Definitions Section 202

- For the most part, an accessible means of egress is made up of the same components and features as the general means of egress.
- However, additional allowances and methods are mandated in recognition of various limitations to egress for physically disabled persons.



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Means of Egress Section 202

- When evaluating an accessible means of egress for compliance, the specific provisions of Section 1007 must be applied as an overlay to the other requirements in Chapter 10.



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Module 2

Locations Where Required



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Accessible MOE Required Section 1007.1

- Accessible means of egress are required from all accessible spaces.
 - Spaces required to be accessible are established in Section 1103.1.
 - In addition, those spaces not required to be accessible but provided with full access must be provided with accessible means of egress.



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Accessible Spaces Section 1103.1

- Sites, buildings and spaces shall be accessible to persons with physical disabilities unless specifically exempted to the extent set forth in Section 1103.2.
- A review of those spaces not required to be accessible is necessary prior to the determination of what spaces require accessible means of egress.



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Specific Requirements Section 1103.2.1

- Sections 1104 through 1110 contain specific provisions that selectively reduce or remove required accessibility, including:
 - Employee work areas
 - Multilevel buildings
 - Parking facilities
 - Dwelling units and sleeping units
 - Assembly seating areas
 - Self-service storage facilities



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Employee Work Areas Section 1104.3.1, Exceptions

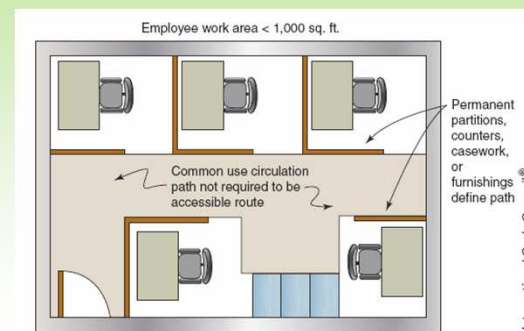
- Common use circulation paths located within employee work areas are not required to be accessible routes where they are:
 - an integral component of equipment, or
 - exterior and fully exposed to the weather, or
 - less than 1,000 square feet in floor area and defined by permanently installed partitions, counters, casework or furnishings.



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Employee Work Areas Section 1104.3.1, Exception 1



Accessible route for common use circulation path



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Multilevel Buildings Section 1104.4, Exceptions

- As a general requirement, at least one accessible route is required to connect each accessible level, including mezzanines.
- However, accessible routes are not required under a number of specific exceptions to Section 1104.4.



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Levels of Limited Size Section 1104.4, Exception 1

- An accessible route is not required to stories and mezzanines having a maximum aggregate floor area of 3,000 square feet, provided the levels do not contain:
 - Group M tenants in a multiple-tenant building containing 5 or more Group M tenant spaces
 - Offices of health care providers
 - Portions of passenger transportation facilities and airports



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Levels without Accessible Elements Section 1104.4, Exception 2

- An accessible route is not required to levels that do not contain accessible elements or other spaces as determined by Sections 1107 and 1108, including:
 - Parking facilities
 - Dwelling units and sleeping units
 - Assembly seating areas



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Levels with Limited Occupant Loads Section 1104.4, Exception 4

- Where a two-story building has one story with an occupant load of 5 or less, and there is no public use, the story does not need to be connected by an accessible route to the story above or below.



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Courtroom Employee Work Stations Section 1104.4, Exception 5

- Vertical access to employee work stations within a courtroom is not required at the time of initial construction, however, it must be possible to install a ramp, lift or elevator without requiring a reconfiguration or extension of the courtroom, or extension of the electrical system.



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Parking Facilities Section 1106

- Where parking is provided in a facility, a percentage of the parking spaces shall be accessible spaces.
- Such spaces need not be provided on all levels of a multilevel facility, however they are required:
 - On the shortest accessible route of travel to the building entrance, and
 - On levels with pedestrian access to a building.



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Dwelling Units and Sleeping Units Section 1107

- In residential and institutional occupancies, a representative number of accessible units must be provided.
- Accessible routes are not required to those levels of the building without accessible units, common use areas and public areas.
- Section 1107.7 also provides general exceptions for accessible stories in buildings without elevator service.



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Assembly Seating Areas Section 1108.2

- In assembly seating areas with fixed seating, a specified number of wheelchair spaces are required.
 - An accessible route is not required to areas of the seating area containing no wheelchair spaces.



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Assembly Seating Areas Section 1108.2

- In multilevel assembly seating areas, a mezzanine or second floor does not need to be accessible where containing no more than 25 percent of the total seating capacity.
 - No occupant load limit on places of worship
 - Limit of 300 on inaccessible level in other types of assembly uses



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Self-storage Facilities Section 1108.3

- A limited number of self-storage facilities are required to be accessible.
- All others need not be located on an accessible route.



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Existing Buildings Section 1103.2.2

- Section 3411 contains all accessibility requirements specific to existing buildings.
- The degree of accessibility varies based upon the specifics related to the existing building.



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Employee Work Areas Section 1103.2.3

- Work areas less than 300 square feet need not be accessible where:
 - Located at least 7 inches above or below the finished floor, and
 - Change in elevation essential to function of the space.



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Employee Work Areas Section 1103.2.3

- Other work areas need only comply with:
 - Section 907.5.2.3.2 Visible alarms
 - Section 1007 Accessible MOE
 - Section 1104.3.1 Accessible routes
- They shall also be designed and constructed so that individuals with disabilities can approach, enter and exit the work area.



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Detached Dwellings Section 1103.2.4

- Detached one- and two-family dwellings and associated accessory structures are not required to be accessible.
- Three-family dwellings are also exempt under the scoping provisions of Section 1107.



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Utility Buildings Section 1103.2.5

- All Group U buildings are exempt, other than:
 - Paved work areas and areas open to the general public in agriculture buildings.
 - Private garages and carports that contain required accessible parking.



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Construction Sites Section 1103.2.6

- Structures, sites and equipment directly associated with the processes of construction are not required to be accessible.



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Raised Areas Section 1103.2.7

- Raised areas used primarily for the purposes of security, life safety or fire safety are not required to be accessible, including:
 - Observation galleries
 - Prison guard towers
 - Fire watch towers
 - Lifeguard stands



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Limited Access Spaces Section 1103.2.8

- Nonoccupied spaces accessed by the following means are not required to be accessible:
 - Ladders
 - Catwalks
 - Crawl spaces
 - Freight elevators
 - Very narrow passageways



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Equipment Spaces Section 1103.2.9

- Spaces that are only accessed by personnel for maintenance, repair or monitoring of equipment are not required to be accessible, including:
 - Elevator pits and penthouses
 - Mechanical, electrical and communications equipment rooms
 - Piping or equipment catwalks
 - Transformer vaults



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Single-occupant Structures Section 1103.2.10

- Single-occupant structures accessed only by passageways below grade or elevated above grade need not be accessible, such as toll booths.



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Residential Group R-1 Section 1103.2.11

- Group R-1 buildings containing five or fewer sleeping units are not required to be accessible if occupied as the residence of the proprietor.
- A bed-and-breakfast facility is a common example of such a building.



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Detention and Correctional Facilities Section 1103.2.14

- In detention and correctional facilities, common use areas that do not serve holding cells or housing cells are not required to be accessible.



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Additional Exemptions Section 1007.1, Exceptions

- In addition to those inaccessible spaces identified in Section 1103.2, there are additional exemptions established in the exceptions to Section 1007.1.



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Alterations to Existing Buildings Section 1007.1, Exception 1

- Where alterations are being made to an existing building, accessible means of egress are not required.
- Other types of work or a change in occupancy of an existing building are specifically addressed in Section 3411.



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Accessible Mezzanines Section 1007.1, Exception 2

- Where a mezzanine is required to be accessible, only one accessible means of egress is required.
- A single accessible means of egress is permitted even for those mezzanines having two or more means of egress.



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Assembly Area Aisles Section 1007.1, Exception 3

- Only one means of egress is required from wheelchair spaces accessed by aisles in assembly areas, provided the common path of travel is in compliance.
- As a note, accessible means of egress are not required from areas of assembly seating not provided with wheelchair spaces.



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Accessible Means of Egress

- Where there are no specific allowances or exemptions for accessibility, it is expected that spaces are to be fully accessible.
- Therefore, accessible means of egress will be required in accordance with Section 1007



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Minimum Number Section 1007.1

- A minimum of one accessible means of egress is required from all accessible spaces.
- Where two or more means of egress are required by Section 1015.1 (spaces) or 1021.1 (stories), a minimum of two accessible means of egress are required from an accessible space.




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Module 3

Building Components



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Accessible MOE Continuity Section 1007.2

- Each required accessible means of egress must be continuous to the public way.
- This is consistent with the end point for a means of egress system.
- Travel extending to the public way need not be accessible where an exterior area for assisted rescue is provided on the exterior landing at the exit door (Section 1007.7).



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Accessible MOE Components Section 1007.2

- Each required accessible means of egress shall consist of one or more of the following components:
 - Accessible routes and ramps
 - Exit access, interior exit and exterior exit stairways
 - Elevators and platform lifts
 - Horizontal exits
 - Areas of refuge and exterior areas for assisted rescue



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Accessible Routes Section 1007.2, #1

- An accessible route is the most common component of an accessible means of egress.
- It is made up of those walking surfaces that are in compliance with Chapter 4 of A117.1, including travel through aisle accessways, aisles, doors, corridors, exit passageways and similar horizontal exitways.



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Interior Exit Stairways Section 1007.2, #2

- Interior exit stairways are exit components that provided a protected environment for occupants during vertical travel.
- If necessary, such stairways can be used for assisted evacuation in an enclosure having a 1-hour or 2-hour fire-resistance rating.
- Section 1009 of the IBC provides the technical requirements for accessible stairways.



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Exit Access Stairways Section 1007.2, #3

- Exit access stairways, although not typically located within a protected enclosure, may also be considered as a portion of an accessible means of egress.
- Exit access stairways are typically limited in use for the connection of no more than two stories.



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Exit Access Stairways Section 1007.2, #3

- Exit access stairways cannot be used as an accessible means of egress where connecting levels within a story.
- It is considered acceptable to use these stairways as accessible means of egress from mezzanines, because the intent of the prohibition is limited to small elevation changes.



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Exterior Exit Stairways Section 1007.2, #4

- Much like interior exit stairways, exterior exit stairways are considered as 'exit' components providing a significant degree of occupant protection.
- Exterior stairways serving the level of exit discharge are not regulated under this method, but rather by the exterior area of assisted rescue provisions of Section 1007.7.



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Elevators

Section 1007.2, #5

- Although not permitted for use as a general means of egress component, complying elevators may be considered as part of an accessible means of egress.
- Section 407 of A117.1 provides the technical requirements for accessible elevators.



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Platform Lifts

Section 1007.2, #6

- Platform lifts are only permitted as a portion of the accessible means of egress where they are allowed to be a part of a required accessible route.
- The use of platform lifts is limited to very specific and limited applications.
- Section 410 of A117.1 provides the technical requirements for accessible platform lifts.



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Horizontal Exits

Section 1007.2, #7

- A horizontal exit is permitted as a part of an accessible means of egress due to its ability to function as a refuge area.
- Affording a significant level of fire and smoke protection without the need for vertical travel, a horizontal exit is also an acceptable component in the general means of egress.
- Horizontal exits are regulated by Section 1025 of the IBC.



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Ramps

Section 1007.2, #8

- Complying ramps provide both accessible access and accessible egress as they are typically usable without assistance being required.
- Accessible ramps must comply with IBC Section 1010 as well as A117.1 Section 405.



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Areas of Refuge Section 1007.2, #9

- Areas of refuge are used in conjunction with stairways and/or elevators to provide a protected area in which individuals can await assistance or rescue.
- Typically only provided in nonsprinklered buildings, areas of refuge are often located within a stairway enclosure.



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Exterior Areas of Assisted Rescue Section 1007.2, #10

- Only applicable where serving egress at the level of exit discharge, exterior areas of assisted rescue are similar to areas of refuge.
- These exterior refuge areas are required where the exit discharge to the public way is not fully accessible.



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Elevators Required Section 1007.2.1

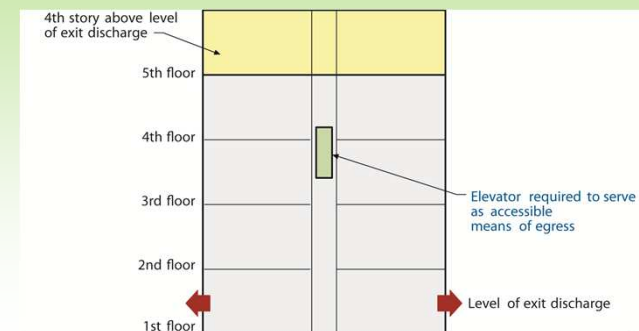
- In buildings with an accessible floor is located more than four stories above or below a level of exit discharge, at least one means of egress shall be a complying elevator.
- The application of this requirement typically is limited to buildings five or more stories above grade plane.



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Elevators Required Section 1007.2.1



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Elevators Required Section 1007.2.1

- Although elevators may be used as a part of the accessible means of egress in all buildings, their required use only applies to mid-rise and high-rise structures.
- The requirement does not apply in fully sprinklered buildings on floors where:
 - a horizontal exit is provided, or
 - a conforming ramp is provided.



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Stairways Section 1007.3

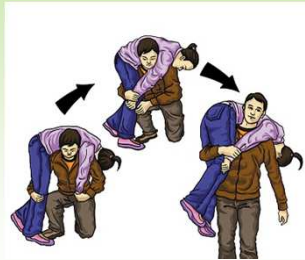
- Stairways connecting stories may be considered as a part of the accessible means of egress where:
 - There is a clear width between handrails of 48 inches, and
 - An area of refuge is incorporated within a floor level landing, or
 - The stairway is accessed from either an area of refuge or a horizontal exit.



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Stairways Section 1007.3



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Stairways Section 1007.3, Exceptions

- The area of refuge is not required in:
 - Sprinklered buildings
 - Open parking garages
 - Group R-2 occupancies
 - Smoke-protected assembly seating areas
- The 48 inches of clear width between handrails is not required:
 - In sprinkler buildings
 - Where access is from a horizontal exit



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Elevators Section 1007.4

- In order to be considered as part of an accessible means of egress, an elevator must:
 - Be provided with standby power, and
 - Comply with the emergency operation and signaling device requirements of ASME A17.1.
- Access to the elevator shall be provided from either an area of refuge or horizontal exit.



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Elevators Section 1007.4, Exceptions

- Elevators are not required to be accessed from an area of refuge or horizontal exit:
 - In fully sprinklered buildings
 - In open parking garages
 - In smoke-protected assembly seating areas
 - Where the elevator is not required to be located in a shaft enclosure



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Platform Lifts Section 1007.5

- Platform lifts, provided with standby power, are only permitted as part of an accessible means of egress where serving:
 - Performance areas and speaker platforms in an assembly occupancy
 - Required wheelchair spaces in an assembly seating area
 - Nonpublic spaces with a maximum occupant load of 5



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Platform Lifts Section 1007.5

- Platform lifts, provided with standby power, are only permitted as part of an accessible means of egress where serving:
 - Areas within a dwelling unit or sleeping unit
 - Wheelchair seating spaces located in outdoor dining terraces of Group A-5 occupancies, provided the accessible means of egress is outdoors
 - Areas of a courtroom



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Platform Lifts Section 1007.5

- Platform lifts, provided with standby power, are only permitted as part of an accessible means of egress where serving:
 - Loading and unloading areas for amusement rides
 - Play components and soft-contained play structures
 - Team and player seating areas of sporting activities



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Areas of Refuge Section 1007.6

- An area of refuge is defined as “an area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.
- Areas of refuge are typically required in multi-story nonsprinklered buildings.
- An accessible route must connect accessible spaces to an area of refuge.



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Areas of Refuge Section 1007.6

- Travel distance to an area of refuge is regulated in the same manner as established in Chapter 10 for the general means of egress.
- Direct access shall be provided from an area of refuge to a complying stairway or elevator.



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Areas of Refuge Section 1007.6

- Where an elevator lobby is used as an area of refuge, the lobby, as well as the elevator shaft, shall be constructed in the same manner as a smokeproof enclosure.
 - Not required where the elevators are in an area of refuge formed by an horizontal exit or smoke barrier.



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Area of Refuge Size Section 1007.6.1

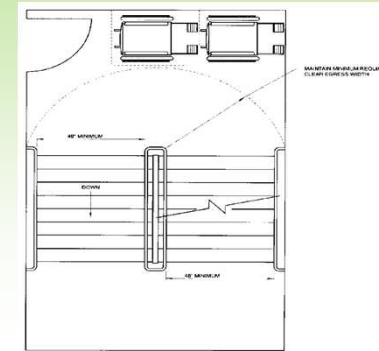
- Each area of refuge shall be sized to accommodate one 30" by 48" wheelchair space per 200 occupants, or portion thereof.
- The required means of egress width shall not be reduced.
- Access to any required wheelchair spaces shall not be obstructed by more than one space.



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Area of Refuge Size Section 1007.6.1



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Area of Refuge Separation Section 1007.6.2

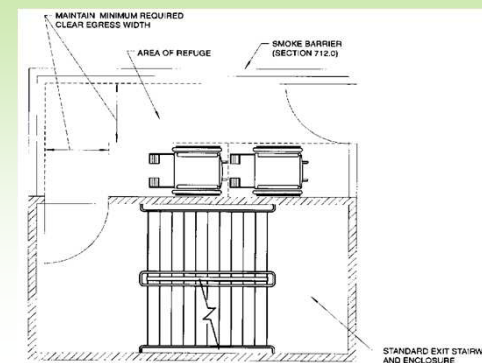
- Each area of refuge shall be separated from the remainder of the story by a:
 - Smoke barrier, or
 - Horizontal exit
- As an alternative, the area of refuge may be located within an exit access stairway or interior exit stairway enclosure.



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Area of Refuge Separation Section 1007.6.2



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Area of Refuge Communications Section 1007.6.3

- Areas of refuge are required to be provided with two-way communications systems complying with:
 - Section 1007.8.1 Systems requirements
 - Section 1007.8.2 Directions



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Exterior Areas for Assisted Rescue Section 1007.7

- Similar to the provisions for areas of refuge, exterior areas for assisted rescue provide a protected area for individuals to await assistance or rescue.
- Such areas must be directly accessed from an accessible route and are used where:
 - The exit discharge is not accessible, or
 - Where outdoor facilities are involved.



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Level of Exit Discharge Section 1007.7.1

- Where the exit discharge does not provide an accessible route from an exit to the public way, an exterior area for assisted rescue is required.
- The exterior area for assisted rescue shall be provided on an exterior landing regulated for size, separation, openness and stairway width.



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Outdoor Facilities Section 1007.7.2

- Accessible outdoor areas not provided with an accessible route for means of egress purposes may be provided with an exterior area for assisted rescue.
- There shall be direct access to an interior exit stairway, exterior stairway or elevator serving as an accessible means of egress.



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Size

Section 1007.7.3

- Each exterior area for assisted rescue shall be sized to accommodate one 30" by 48" wheelchair space per 200 occupants, or portion thereof.



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Separation

Section 1007.7.4

- Exterior areas for assisted rescue shall be separated from the interior of the building by minimum 1-hour exterior walls (rated for exposure from the inside).
- The 1-hour separation must extend horizontally at least 10 feet beyond the landing on both sides.
 - As an alternative, perpendicular protection of at least 4 feet is permitted.



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Separation

Section 1007.7.4

- The fire-resistance-rated construction shall extend vertically from the ground to:
 - A point 10 feet above the floor level of the landing, or
 - The roof line, whichever is lower.
- Openings within the fire-resistance-rated wall must have a minimum ¾-hour fire-protection rating and comply with Section 716.

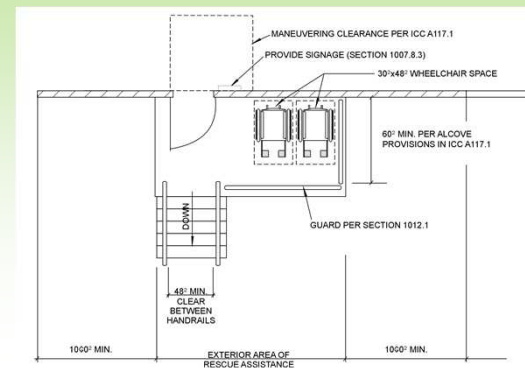


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Separation

Section 1007.7.4

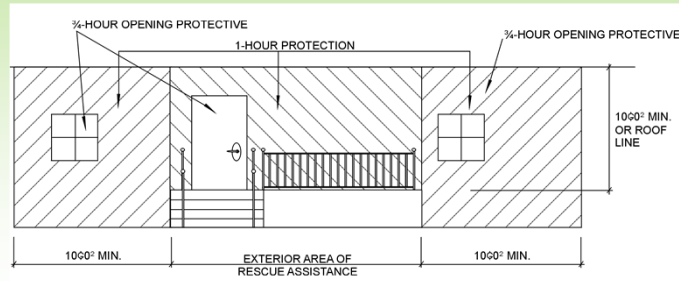


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Separation Section 1007.7.4

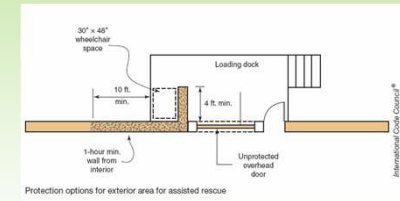


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Separation Section 1007.4

- A minimum 1-hour wall extending a minimum of 4 feet perpendicular to exterior wall is also permitted as acceptable barrier at exterior area for assisted rescue.



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Openness Section 1007.7.5

- Exterior areas for assisted rescue must be open to the outside air.
- The sides, other than the adjacent building wall(s), must be:
 - At least 50% open, and
 - Have openings distributed so as to minimize the accumulation of smoke and toxic gases.



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Stairways Section 1007.6

- In other than sprinklered buildings, stairways that provide egress from exterior areas for assisted rescue shall provide a minimum of 48 inches clear between handrails.



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Module 4

Specific Features and Facilities



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Two-way Communication Systems Section 1007.8

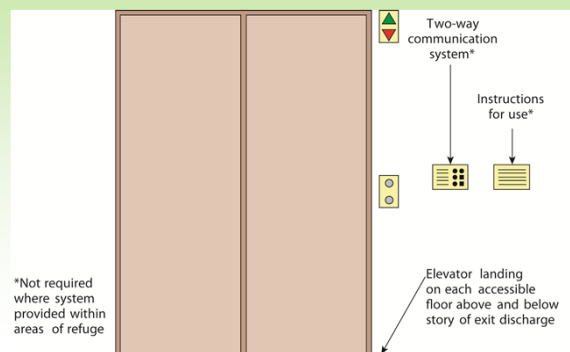
- A two-way communication system is required at the elevator landing on each accessible floor, except:
 - At the level of exit discharge
 - Where the system is provided within areas of refuge
 - On floors provided with ramp access



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Two-way Communication Systems Section 1007.8



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Two-way Communication System Requirements Section 1007.8.1

- Two-way communication systems are required between the areas of refuge or elevator landings and a central control point approved by the fire department.
- Where the control point is not constantly attended, the system shall have a timed automatic telephone dial-out capability to a monitoring location or 9-1-1.



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Two-way Communication System Directions Section 1007.8.2

- The following information must be posted adjacent to the two-way communication system:
 - Directions for use of the system
 - Instructions for summoning assistance via the system
 - Written identification of the location within the building



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Signage Section 1007.9

- Signage indicating special accessibility provisions shall be provided at each door providing access to an area of refuge or an exterior area for assisted rescue from an adjacent floor area.
 - Where exit sign illumination is required by Section 1011.3, the signs shall be illuminated.
 - Raised character and Braille signage shall also be provided at each door.



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Signage Section 1007.9



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Directional Signage Section 1007.10

- Directional signage indicating the location of the other means of egress and which are accessible means of egress shall be provided:
 - At exits serving a required accessible space but not providing an approved accessible means of egress
 - At elevator landings
 - Within areas of refuge, where provided



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Instructions Section 1007.11

- In areas of refuge and exterior areas for assisted rescue, instructions on the use of the area under emergency conditions shall be posted.



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Instructions Section 1007.11

If you are able to use the exit stairway, do so as soon as possible unless assisting others.

Assistance in the use of stairway/elevator is available and can be summoned by

Use of the two-way communications system



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Module 5

Relationship with *ADA Standards for Accessible Design*



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ADA Standards for Accessible Design

- The scoping and technical requirements addressing accessibility and usability are regulated at the Federal level through the *ADA Standards for Accessible Design*.
- The 2010 *Standards*, unlike the previous *ADA Accessibility Guidelines (ADAAG)*, now reference provisions of the IBC for accessible means of egress requirements.



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ADA Standards for Accessible Design - 2010

- Section 207 of the 2010 Standards addresses accessible means of egress by mandating compliance with the applicable IBC provisions:
 - Section 1003.2.13 of the 2000 IBC or 2001 Supplement, or
 - Section 1007 of the 2003 IBC.
- These IBC provisions are incorporated in the *2010 Standards* by reference.



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ADA Standards for Accessible Design - 2010

- Use of the 2006, 2009 and 2012 editions of the IBC are understood to also be acceptable under the “alternative methods” provisions in Chapter 1 of the *2010 Standards*.
- These subsequent editions are widely considered to provide for equal or better accessible means of egress.



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Accessible Means of Egress Section 207 of the 2010 Standards

- There are two exceptions to the IBC provisions in Section 207.1 of the *2010 Standards* :
 - Where means of egress are permitted by local building codes to share a common path of egress travel, accessible means of egress shall be permitted to share a common path of egress travel.
 - Areas of refuge shall not be required in detention and correctional facilities.



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Accessible Means of Egress Section 207 of the 2010 Standards

- Section 207.2 requires that standby power be provided for platform lifts used as a part of an accessible means of egress.
- This provision is only necessary if the 2000 IBC is referenced, as all editions of the IBC require that standby power be provided.



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Exercises



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ACTIVITY



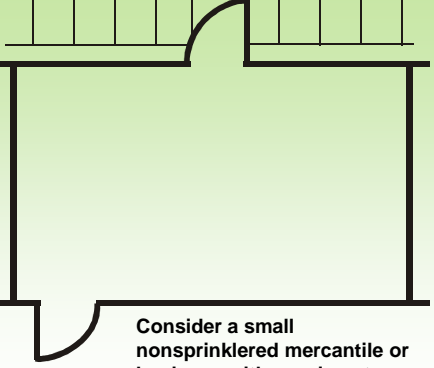
Problem #1

How many entrances are required to be accessible?


- One entrance is required to be accessible (IBC Section 1105.1)

If the occupant load is less than 50, how many exits are required to be accessible?

- One exit is required to be accessible (IBC Section 1007.1).




Consider a small nonsprinklered mercantile or business with a main entrance out the front and a service entrance that serves as a second exit out the back.



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ACTIVITY




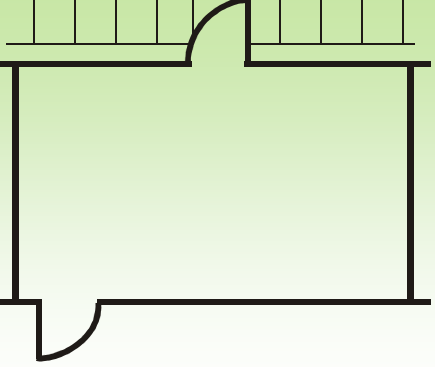
Problem #1

If the occupant load is greater than 50, how many exits are required to be accessible?

- Two exits are required to be accessible (IBC Section 1007.1).

What requirements would change if the building was sprinklered?


- No change to exit requirements for single story buildings, sprinklered or not.



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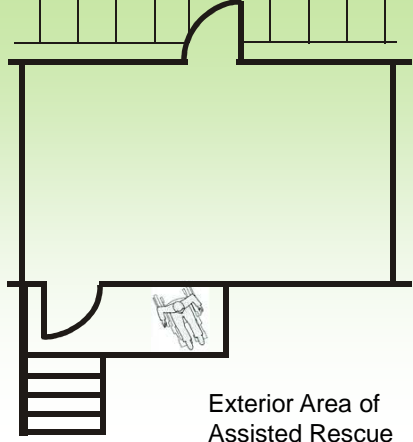
ACTIVITY




Problem #1

If there are steps out the back door, so that exit discharge is not possible, what are the design options?

- An exterior area for assisted rescue or an area of refuge would be design options. (IBC Section 1007.2, Exceptions 1 and 2).



Exterior Area of Assisted Rescue



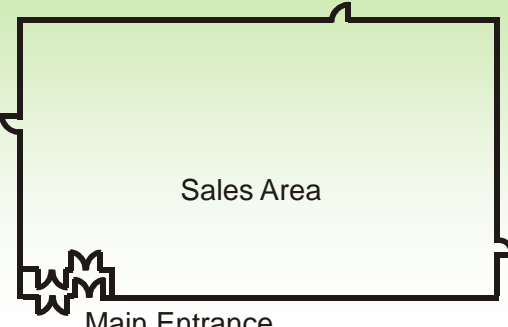
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Problem #2



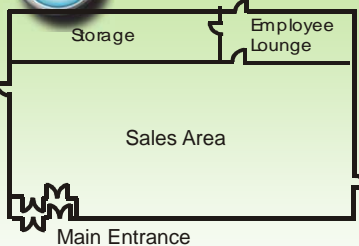
Picture a large one-story, unlimited-area building, with one main entrance and four required exits provided around the perimeter of the store.

- How many entrances would be required to be accessible?
- One entrance is required to be accessible (IBC Section 1105.1).

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Problem #2



- It is the designer's choice as to which exit is accessible. There are no travel distance requirements; however the exit must be distinct.
- If they built a storage area in the back that included an employee entrance and employee break room (greater than 50 occupants), how would that affect entrance and means of egress requirements?
- At least two accessible means of egress must be provided from each space (IBC Section 1107.1). Therefore, the rear door must be accessible and signage must be provided at the nonaccessible entrances or exits (IBC Sections 1110.1, 1110.2 and 1110.3).

How many exits are required to be accessible?
Two exits are required to be accessible (IBC Section 1007.1).

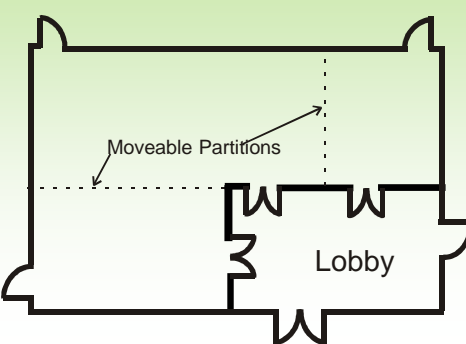
Which exits would they have to be?
What about travel distances?

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Problem #3

- Consider a banquet facility with a main lobby/entrance hall, and a large hall with moveable partitions.
- You could divide the hall into three banquet rooms, each with an occupant load of greater than 50 occupants.



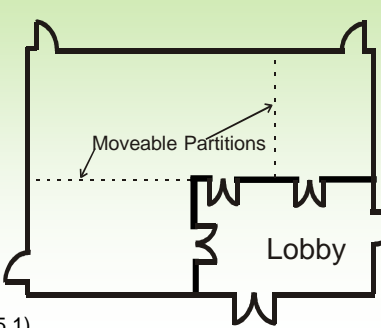
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Problem #3

How many entrances are required to be accessible?

- One accessible entrance is required (IBC Sections 1104.3 and 1105.1).
- How many exits are required (i.e., from the building, from each space)?
- Two means of egress from each space are required to be accessible (IBC Section 1015.1).



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Problem #3

How many exits are required to be accessible?

- Two accessible means of egress from each space, therefore all exits from this facility must be accessible (IBC Section 1007.1).

Moveable Partitions

Lobby

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Problem #4

- In a multistory office building, the elevator in a central core provides the accessible route to the upper floors.
- The requirement for two means of egress from each level is met by two stair towers located in opposite corners.

First, assume this building is five stories and sprinklered throughout.

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Problem #4

How many accessible routes are required into the upper floors?

- One accessible route (via the elevators) is required (IBC Section 1104.4).

How many accessible means of egress?

- Two means of egress are required (IBC Section 1007.1).

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Problem #4

Which elements would be involved in creating the accessible means of egress?

- At least one exit stairway and the elevator shall serve as part of the accessible means of egress (IBC Section 1007.2.1). Note that the sprinkler system would exempt the stairway from the 48-inch (1219 mm) clear width and the areas of refuge (IBC Section 1007.3, Exception 2).
- The elevator must have standby power, but since there is a sprinkler system, the area of refuge would be exempt (IBC Section 1007.4, Exception 2).
- Two way communications must be provided in the elevator lobby (IBC Section 1007.8)

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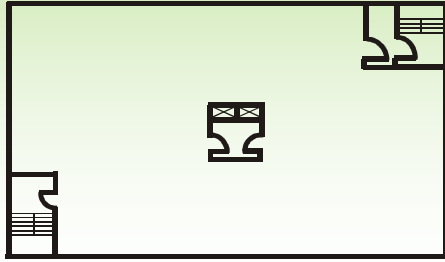
ACTIVITY

Problem #4

Second, same layouts, but assume that this building is two stories, and not sprinklered.

How many accessible routes into the second floor are required?

- One accessible route (via the elevators) is required (IBC Section 1104.4) unless the second floor is less than 3,000 square feet (279 m²).
- How many accessible means of egress are required?



- Two accessible means of egress if the level is required to be accessible (IBC Section 1007.1).

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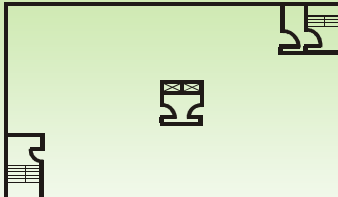
Problem #4

Which exits would be required?

The designer could utilize the stair towers or provide emergency power to the elevator.

What are the requirements for an area of refuge?

- One wheelchair space (i.e., 30 by 48 inch) (762 by 1219 mm) is required for each 200 occupants served. Since the building is not suppressed, an area of refuge is required to have direct access to the two accessible means of egress (IBC Section 1007.3, 1007.4).
- The travel distance is the same as the standard travel distance limits, but measured to the entrance of the area of refuge. Areas of refuge must be separated, have signage and two-way communications (IBC Section 1007.6, 1007.9, 1007.10 and 1007.11).



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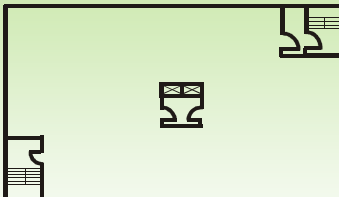
Problem #4

What special requirements would the stairs and/or elevators have to meet?

- When a stairway is part of an accessible means of egress it must have a clear width of 48 inch (1219 mm) and have direct access from the area of refuge. When an elevator is part of an accessible means of egress, it must have standby power and be directly accessed from an area of refuge (IBC Section 1007.3, 1007.4)

Are there any special signage considerations?

- In addition to the signage at the areas of refuge, directional signage must be provided at the elevator and any nonaccessible means of egress (IBC Section 1007.10). Instructional signage must be provided at the two way communication system (IBC Section 1007.8.2). Tactile signage is required at stairways (IBC Sections 1110.3 and 1011.3).



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Thank you for participating!!!

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