

NCIDQ SECTION 3 BUILDING CODE REQUIREMENTS

Code requirements listed below are for the purpose of the NCIDQ Examination only.

Your exam exercises will be graded for compliance with these code requirements. Use the following codes to develop your design solution for the **TOTAL** space as necessary to protect the health, safety, and welfare of the public.

1.0 DEFINITIONS

- 1.1 Common Path of Egress Travel – The portion of the exit access [access to an exit] that must be traversed **BEFORE** two separate and distinct paths of travel to two exits are available. Common path of egress travel shall be included within the permitted travel distance.
- 1.2 Travel Distance – The distance measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel.

2.0 FIRE-RESISTANT RATED CONSTRUCTION

- 2.1 Demising partitions between tenant spaces **MUST** be 1-hour fire rated.
- 2.2 Partitions along a public corridor **MUST** be 1-hour fire rated.
- 2.3 Partitions that demise an Assembly Occupancy of 750 sq. ft. [70 m²] or greater **MUST** be 1-hour fire rated.
- 2.4 Door assemblies in a 1-hour fire rated partition **MUST** have a minimum fire protection rating of 20 minutes and be self-closing.
- 2.5 Storage rooms exceeding 100 sq. ft. [9.3 m²] **MUST** be 1-hour rated.
- 2.6 Glazing in fire rated partitions, doors or sidelights may not exceed 240 sq. in. [1548 cm²].

3.0 FIRE PROTECTION SYSTEM

- 3.1 There **MUST** be an audio/visual fire signal device located in each restroom, hallway, lobby, and general assembly area.
- 3.2 An audio/visual fire signal device **MUST** be visible from any location in the room or space and **MUST** be mounted between 6'-8" to 7'-6" [2 m to 2.3 m] AFF.
- 3.3 The minimum number of fire extinguishers **MUST** be calculated based on one (1) fire extinguisher per 3000 sq. ft. [280 m²].
- 3.4 Fire extinguishers **MUST** be located no more than 75' [23 m] from the furthest occupant.
- 3.5 Smoke and Heat Detector coverage **MUST** include all rooms, corridors and storage areas.

4.0 MEANS OF EGRESS

- 4.1 General Means of Egress
 - 4.1.1 The means of egress **MUST** have a ceiling height of not less than 7'-6" [2.3 m].
 - 4.1.2 Protruding objects are permitted to extend below the minimum ceiling height provided a minimum headroom of 6'-8" [2 m] shall be provided along the path of egress, including any corridor, aisle or passageway.
 - 4.1.3 Protruding objects **MUST NOT** reduce the minimum clear width of accessible routes.

4.1.4 **ALL** objects located on a wall between 27" [685 mm] and 80" [2115 mm] AFF **MUST NOT** protrude more than 4" [100 mm] into an egress path of travel.

4.2 Exit Signs

4.2.1 Exit signs with a directional indicator (illuminated) showing the direction of travel shall be placed in every location where the direction of travel to reach the nearest exit is not apparent.

4.3 Illumination

4.3.1 Emergency illumination shall be provided for a minimum of 1½ hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination along the path of egress.

4.4 Travel Distance

4.4.1 **ALL** paths of travel **MUST** be accessible (barrier-free) and provide at minimum a 60" [1500 mm] turning radius at changes of travel direction.

4.4.2 The path of egress travel **MUST NOT** pass through a secondary space that is subject to closure by doors or that contains storage materials or has items that project into the path of travel.

4.4.3 The common path of egress travel distance **MUST NOT** exceed 100'-0" [30.5 m].

4.4.4 The travel distance to an exit **MUST** be measured on the floor along the centerline of the natural path of travel, starting from the most remote point to the centerline of the exit.

4.4.5 The travel distance **MUST NOT** exceed 250'-0" [76.2 m] measured along the path of travel.

4.5 Exit Access Doors, Doorways, Door Hardware and Windows

4.5.1 The height of doors **MUST NOT** be less than 7'-0" [2.1 m].

4.5.2 **ALL** door openings shall be a **MINIMUM** of 36" [900 mm] wide with an 18" [450 mm] clear space on the pull side of the door and a 12" [300 mm] clear space on the push side of the door.

4.5.3 Where a pair of doors is provided, one of the doors **MUST** be not less than 36" [900 mm] wide.

4.5.4 Locks, if provided, **MUST NOT** require the use of a key, special knowledge, or effort for operation from the egress side.

4.5.5 Doors opening from occupied spaces into the path of egress travel shall not project more than 7" [180 mm] into the required width.

4.5.6 Exit access doorways **MUST** open in the direction of exit travel.

4.5.7 Exit access doorways **MUST** be placed at a distance that is equal to or greater than:

4.5.7.1 When the building is **NOT** sprinklered, one-half the length of the maximum overall diagonal dimension of the area being served, measured in a straight line between exit doors or exit access doorways.

4.5.7.2 When the building is sprinklered, one-third the length of the maximum overall diagonal dimension of the area being served, measured in a straight line between exit doors or exit access doorways.

4.5.8 Two (2) exit access doorways **MUST** be provided from any space where the Occupancy Load exceeds 49 in Occupancy Groups A (Assembly), B (Business) and M (Mercantile) or exceeds 29 in Occupancy Group S (Storage).

4.6 Corridors

4.6.1 The **MINIMUM** interior corridor width **MUST** be 44" [1100 mm].

4.6.2 Dead end corridors **MUST NOT** exceed 20'-0" [6 m] in length.

5.0 ACCESSIBILITY

5.1 Service (reception/transaction) counters over 8'-0" [2.4 m] in length **MUST** have an accessible height service counter, a minimum of 36" [900mm] in length.

5.2 **ALL** accessible (barrier-free) countertops, sinks, reception/transaction surfaces, and other horizontal work surfaces **MUST NOT** exceed 34" [865 mm] AFF with a 27"H [685 mm] clear knee space below.

5.3 **ALL** accessible (barrier-free) counters **MUST** have clear knee space of at least 30"W x 17"D [760 mm x 430 mm].

5.4 **ALL** exposed hot water pipes and drains **MUST** be insulated or otherwise protect wheelchair users from burns on the legs.

5.5 **ALL** accessible (barrier-free) wall-mounted controls **MUST** be located between 15" [380 mm] and 44" [1100 mm] AFF for a Forward Reach and between 9" [230 mm] and 48" [1200 mm] AFF for a Side Reach.

5.6 **ALL** accessible (barrier-free) lower cabinets **MUST** have a 6" D maximum x 9" H minimum [150mm x 230 mm] toe-kick.

5.7 **ALL** accessible (barrier-free) upper cabinets or shelves located above a work surface **MUST NOT** exceed 44" [1100 mm] AFF.

5.8 Restrooms [Washrooms]

5.8.1 **ALL** accessible toilets **MUST** have an unobstructed 60" [1500 mm] turning circle.

5.8.2 Centerline of accessible toilets **MUST** be 16"-18" [400 mm - 450 mm] from side wall or partition.

5.8.3 Clearance around accessible toilets **MUST** be 60" [1500 mm] along the rear wall and 56" [1420 mm] along the side wall.

5.8.4 Accessible toilets **MUST** be mounted at 17"-19" [430 mm – 480 mm] AFF to the top of the toilet seat.

5.8.5 **ALL** grab bars at toilets **MUST** be 36" [900 mm] long at the rear and 42" [1060 mm] long at the side, mounted between 33" [840 mm] and 36" [900 mm] AFF.

5.8.6 **ALL** accessible showers **MUST** have horizontal grab bars on three (3) sides mounted at a height between 33" [840 mm] and 36" [900 mm] AFF.

5.8.7 Accessible showers **MUST** be a minimum of 30" [760 mm] x 60" [1500 mm].

5.8.8 Accessible urinals **MUST** have an elongated rim at a maximum height of 17" [430 mm] AFF.

5.8.9 A clear floor space of 30" [760 mm] x 48" [1200 mm] **MUST** be provided in front of accessible lavatories, urinals, showers, and bathtubs.

5.8.10 Accessible mirrors **MUST** be mounted with the edge of the reflective surface no higher than 40" [1000 mm] AFF.

6.0 STRUCTURAL

6.1 Core drills **MUST NOT** be within 18" [450 mm] of any structural element.

7.0 ELECTRICAL

7.1 **ALL** electrical receptacles **MUST** be 18" [450 mm] AFF unless otherwise noted.

7.2 **ALL** electrical receptacles located within 36" [900 mm] of a water source **MUST** be GFI.

7.3 Clearance of 36" [900 mm] deep **MUST** be provided in front of power panels.

8.0 OCCUPANCY LOAD TABLE

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. [m ²] PER OCCUPANT
Accessory storage areas, mechanical equipment room	300 [28 m ²] gross
Assembly without fixed seats Concentrated (chairs only—not fixed) Standing space Unconcentrated (tables and chairs)	7 [.7 m ²] net 5 [.5 m ²] net 15 [1.4 m ²] net
Business areas	100 [9.3 m ²] gross
Education Classroom area Shops and other vocational room areas	20 [1.9 m ²] net 50 [4.6 m ²] net
Exercise rooms	50 [4.6 m ²] gross
Kitchens, commercial	200 [18.6 m ²] gross
Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	60 [5.6 m ²] gross 30 [2.8 m ²] gross 300 [28 m ²] gross
Residential	200 [18.6 m ²] gross