

Highlights of the National Building Code of Canada 2005

Notes: In this Code Reference Guide, "fire protection system" means an approved sprinkler system, approved fire alarm system, or both. Numbers in brackets () refer to applicable sections of the code publication.

Door Release Hardware - Exits (3.4.6.15) - continued

- device releases upon operation of a manually operated switch accessible only to authorized personnel, and
- a force of 90 N applied to the door opening hardware initiates an irreversible process that releases the locking device within 15 seconds and device shall not relock until the door has been opened, and
- upon release, the locking device must be manually reset by the switch referred to above, and
- if more than one locking device of this type is used in a building, the switch must release and reset all locking devices simultaneously (appendix), and
- a legible sign must be permanently mounted on the exit door to indicate that the locking device will release 15 seconds after the application of force to the door opening hardware
- operating hardware for the doors to in this section shall be installed 1200 mm maximum above the finished floor

Security for Banks and Mercantile Floor Areas (3.4.6.16)

- requirements of section 3.4.6.15 may be waived for bank and mercantile occupancies due to security concerns
- buildings must be sprinklered throughout
- consult section 3.4.6.16 for specific requirements

Emergency Access to Floor Areas (3.4.6.17)

In a building more than 6 stories high,

- doors providing access to floor areas from exit stairs shall not have locking devices to prevent access to the floor area from which the travel distance up or down to an unlocked door is more than 2 stories
- doors that provide access to the floor area (as required above) shall have signage on the stair side to indicate that they are openable from the stair side
- a master key for all locked doors in a stairwell shall be provided in a designated location accessible to fire-fighters, or the locked door shall have a wire glass panel not less than 0.0645 m² in area and located not more than 300mm from the door opening hardware
- if access to floor areas through unlocked doors is required by this section, an occupant entering the floor area must have access, through unlocked doors within the floor area, to at least one other exit

Barrier-Free Doorways and Doors (3.8.3.3)

- every doorway in a barrier-free path of travel shall have a clear width of at least 800 mm when the door is in the open position (measured from the face of the door at 90 degrees to the outside edge of the frame stop, the projection of exit devices is taken into account - appendix)
- the doorway of at least one bathroom within a residential suite must have a clear width of at least 800mm when the door is in the open position
- door operating devices shall not require tight grasping or twisting of the wrist to operate
- thresholds shall be a maximum of 13 mm above the floor surface and shall be beveled
- doors that provide a barrier-free path of travel at an entrance referred to in Article 3.8.1.2 shall be equipped with a power operator in a hotel, a building of Group B, Division 2 major occupancy, and a building of Group A, D, or E major occupancy more than 500 m² in building area (exception - individual suite having an area less than 500 m² in a building having only suites of Assembly Occupancy, Business and Personal Services Occupancy, or Mercantile Occupancy if the suite is completely separated from the remainder of the building so that there is no access to the remainder of the building)
- door closers used in a barrier-free path of travel shall require a maximum force applied at the handle, push plate, or latch releasing device of no more than 38 N to operate an exterior door and 22 N to operate an interior door (exception - entrance to a dwelling unit, or where greater forces are required to close the door against prevailing difference in air pressure)
- door closers used on interior doors in a barrier-free path of travel shall have a closing period of not less than 3 seconds from the open position of 70 degrees to a point 75mm from the closed position, measured from the leading edge of the latch side of the door (exception - dwelling unit entrance doors), delayed action not required (appendix)
- only the active leaf in a multiple leaf door in a barrier free path of travel need to conform to the requirements

Door Swing (3.3.1.11)

- except where sliding doors are permitted by section 3.3.1.12, doors opening into a corridor or other facility providing access to exit access shall swing on a vertical axis, and if the occupant load is 60 or more or if serving a high hazard industrial occupancy, the door shall swing in the direction of travel to the exit
- every door that divides a corridor that is not wholly contained within a suite shall swing on a vertical axis in the direction of travel to the exit
- if a pair in a corridor provides access to exit in both directions, The doors shall swing in opposite directions, with the door on the right hand side swinging in the direction of travel to the exit
- swing-type doors from service rooms containing incinerators or boilers shall swing outward from the room except if the door opens onto a corridor or any room used for Assembly occupancy (3.6.2.6)
- refer to section 3.4.6.11 for swing requirements for exit doors

Doors and Door Hardware (3.3.1.13)

- a door that opens into or is located within a public corridor and provides access to an exit shall provide a clear opening of 800mm minimum for a single door or active leaf of a pair (1050mm minimum for doors required to accommodate moving patients in beds per 3.3.3.4)
- exit access doors shall be readily openable in the direction of exit travel, requiring no keys, special devices, or specialized knowledge (exception for contained use area or impeded egress zone)
- exit access doors shall be operable with one hand and one releasing operation (exception for dwelling unit/suite)
- dwelling unit doors may have an additional releasing operation, with no keys, special devices or knowledge
- door release hardware must be installed 1200mm maximum above the finished floor
- except for hotels and motels, doors opening onto a public exit access corridor must not relock automatically (3.3.4.5)

Door Swing - Exits (3.4.6.11)

- except where sliding doors are permitted by section 3.4.6.13, every exit door shall open in the direction of exit travel and swing on a vertical axis

Self-Closing Devices - Exits (3.4.6.12)

- exit doors normally required to be kept closed shall be self-closing and shall not be secured in the open position except as allowed by section 3.1.8.12(1)

Door Release Hardware (3.4.6.15)

- locking, latching, and other fastening devices on the principal entrance door and all exit doors shall permit the door to be readily opened from the egress side with one operation and without the use of keys, special devices, or specialized knowledge (exceptions for contained use area, impeded egress zone, electromagnetic locks and security doors on banks and mercantile facilities)
- if the door is equipped with a latch, a device which will release the latch and allow the door to swing wide open when a force of not more than 90 N is applied in the direction of travel to the exit shall be installed on:
 - every exit door from a floor area of an Assembly Occupancy with an occupant load of more than 100,
 - every door leading to an exit lobby from an exit stair shaft and every exterior door leading from an exit stair shaft in a building having an occupant load of more than 100,
 - every exit door from a floor area containing a High Hazard Industrial occupancy
- except where required by section 3.8.3.3 (Barrier-Free Doorways and Doors), every exit door shall open with a force of not more than 90 N after the latch is released, force applied at the releasing device

- electromagnetic locks without latches, pins, or other devices to keep the door closed may be installed on exit doors except doors leading directly from high hazard industrial occupancies, provided:
 - building is equipped with a fire alarm system, and
 - locking device and all similar devices in the exit access leading to the exit unlock upon fire alarm, and
 - locking device releases upon loss of power to the lock and associated auxiliary controls, and

Use Groups (consult code for complete descriptions)

- A - Assembly
- B - Care or Detention
- C - Residential
- D - Business and Personal Service
- E - Mercantile
- F - Industrial