

Chapter Ind 51

DEFINITIONS AND STANDARDS

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Ind 51.01 Definitions. (1) **ACCESSORY ROOM.** Any room or enclosed floor space used for eating, cooking, bathrooms, water closet compartments, laundries, pantries, foyers, hallways, and other similar floor spaces. Rooms designated as recreation, study, den, family room, office, etc., in addition to habitable rooms, are considered accessory rooms.

(1a) **AIR CONDITIONING.** The process of treating air to control simultaneously its temperature, humidity, cleanliness and distribution to meet the requirements of the conditioned space.

(2) **ALLEY.** Any legally established public thoroughfare less than 30 feet in width but not less than 10 feet in width whether designated by name or number.

(3) **APPROVED.** Approval granted by the department under the regulations stated in this code.

(4) **AREA (GROSS).** The maximum horizontal projected area within the perimeter of the outside surface of walls or supports of the building or structure. Exterior cantilever open balconies are not included.

(5) **AREA (NET).** The occupied or usable floor area in a building but not including space occupied by columns, walls, partitions, mechanical shafts or ducts.

(5a) **AREAWAY.** Exterior area whose grade is below the grade (at building) and having at least one side consisting of the exterior wall of a building.

*See Appendix A for further explanatory material.

(6) **ATTIC.** The space not used for human occupancy located between the ceiling of uppermost story and the roof.

(7) **AUTOMATIC.** Automatic as applied to a fire protective device, is one which functions without human intervention and is actuated as a result of the predetermined temperature rise, rate of rise of temperature, combustion products or smoke density such as an automatic sprinkler system, automatic fire door, automatic fire shutter, or automatic fire vent.

(7a) **AUTOMATIC FIRE SPRINKLER SYSTEM.** An automatic fire sprinkler system is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the building side of an approved check valve or approved backflow preventing device located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(8) **BALCONY (EXTERIOR).** An elevated platform attached to a building and enclosed on one or more sides by railings.

(9) **BALCONY (INTERIOR).** An open intermediate level or stepped floor. Also see "Stories, Number of."

(10) **BASEMENT.** A basement floor is that level below the first or ground floor level with its entire floor below exit discharge grade.

(11) **BEARING WALL.** See "Wall (bearing)."

(12) **BUILDING.*** A structure for support, shelter or enclosure of persons or property.

(13) **BUILDING HEIGHT.** See "Height (building)."

(14) **BUTTRESS.** A structural projection which is an integral part of a wall, primarily to provide resistance to lateral forces.

(15) **CAVITY WALL.** See "Wall (cavity)."

(16) **CEILING PROTECTION.** The fire protection membrane suspended beneath the floor or ceiling construction which, when included with the construction, develops the fire-resistive rating for the overall assembly.

(17) **CLOSING DEVICE (FIRE DOOR).** A closing device is one which will close the door and be adequate to latch and/or hold hinged or sliding door in a closed position.

*See Appendix A for further explanatory material.

(4) **LABELS.** Fire window assemblies shall be labeled with a permanent label, securely attached and located to permit visual inspection after installation. The label shall identify the time rating, testing laboratory, listing agency and manufacturer. Glass block shall be listed by an approved laboratory.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76.

Ind 51.049 Miscellaneous openings in fire-rated construction.

(1) **SERVICE OPENINGS.** Openings around ducts, pipes, conduit or other service installations penetrating required fire-resistive rated floor, wall and roof assemblies shall be filled solidly with material of fire-resistive rating equal to the required rating of assembly penetrated.

(2) **FIRE DAMPERS.** Duct openings in required fire-resistive rated floor and wall assemblies shall be protected as specified under section Ind 64.42.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76.

Ind 51.050 Roof coverings. (1) Roof coverings of class A, B, C or unclassified shall be provided as specified under "Classes of Construction" or under the specific occupancy requirements.

Note: Brick, concrete, tile, slate, ferrous and cupreous metals and their alloys will be accepted as "Class A" roof coverings.

History: Cr. Register, February, 1971, No. 182, eff. 7-1-71; r. eff. 8-1-71, and rec. eff. 1-1-72, Register, July, 1971, No. 187; renum. from 51.048 to be 51.050, Register, December, 1975, No. 240, eff. 1-1-76.

Ind 51.08 Occupancy separations. (1) When a building is used for more than one occupancy purpose, each part of the building comprising a distinct occupancy division shall be separated from any other occupancy division as provided for under the occupancy requirements of this code.

(2) Occupancy separations shall be classed as "Absolute", "Special" and "Ordinary" and shall apply to both horizontal and vertical separations.

(a) An absolute occupancy separation shall have no openings therein and shall have walls and floors of not less than 4-hour fire-resistive construction as specified in section Ind 51.04.

(b) A special occupancy separation shall have walls and floors of not less than 3-hour fire-resistive construction as specified in section Ind 51.04. All openings in walls forming such separation shall be protected on each side thereof by self-closing fire-resistive doors as specified in section Ind 51.047, and such doors shall be kept normally closed. The total width of all openings in any such separating wall in any one story shall not exceed 25% of the length of the wall in that story and no single opening shall have an area greater than 120 square feet.

1. All openings in floors forming this type of separation shall be protected by vertical enclosures extending above and below such openings. The walls of such vertical enclosures shall be of not less

*See Appendix A for further explanatory material.

than 2-hour fire-resistive construction as specified in section Ind 51.04 and all openings therein shall be protected on one side thereof by self-closing 1-hour fire-resistive doors as specified in section Ind 51.047 and such doors shall be kept normally closed.

(c) An ordinary occupancy separation shall have walls and floors of not less than 1-hour fire-resistive construction as specified in section Ind 51.04. All openings in such separations shall be protected by self-closing fire-resistive doors as specified in section Ind 51.047 and such doors shall be kept normally closed.

History: 1-2-56; r. and recr. (2) (c), Register, October, 1967, No. 142, eff. 11-1-67; am. (2) (a), (b) and (c), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (2) (a), (b) and (c) eff. 8-1-71 and expiring 1-1-72 and cr. (2) (a), (b) and (c) eff. 1-1-72, Register, July, 1971, No. 187.

Ind 51.14 Glazing. (1) **SAFETY GLAZING.** All glazing material used in hazardous impact locations shall be safety glazing material. All replacements of glazing material in hazardous impact locations made after November 30, 1976, shall be safety glazing, except the replacement of glazing outlined in section Ind 51.14 (2) (c).

(a) *Location.* Hazardous impact locations are all glazed elements such as framed or unframed interior or exterior glass doors, fixed or operating flat panels immediately (within 2 feet of nearest vertical edge) adjacent to an entrance or exit door, exterior doors with glass lights, or any other glazed elements which may be mistaken for a means of egress or ingress to a room or building. Other hazardous impact locations are sliding glazed doors and the adjacent glazed fixed or operating panel(s), storm doors, shower doors, tub enclosures, and display cases in areas of human impact in schools.

1. Exception. A fixed or operating flat panel, immediately adjacent to an entrance or exit door, is exempt from the requirements of this section if the lower horizontal edge of the panel is 2 feet or more above the floor.

2. Exception. Any mirror, framed glazed picture or similar decorative object which is attached to a door or wall in a hazardous impact location and which does not in whole or in part conceal any opening in such door or wall is exempt from the requirements of this section.

3. Exception. Leaded stained glass used in exterior or interior doors or in panels adjacent to exterior or interior doors need not be safety glazing.

(b) *Material.* Safety glazing means any glazing material such as tempered glass, laminated glass, wired glass, safety plastic, or safety insulating units which meet the test requirements of the American National Standards Institute (ANSI) standard Z 97.1 [Ind 51.27 (5)], or an equivalent standard, and which are so constructed, treated or combined with other materials to minimize the likelihood of cutting and piercing injuries resulting from human impact with the glazing material.

*See Appendix A for further explanatory material.

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(c) *Labeling.* Safety glazing material shall be labeled with a permanent label by such means as etching, sand blasting, firing of ceramic material, or hot die stamping. Labels identifying safety glazing materials may be omitted provided that a notarized affidavit is submitted to the department certifying the installation of safety glazing material. The label or affidavit shall identify the seller, manufacturer, fabricator, or installer, the nominal thickness and type of safety glazing material, and the fact that the material meets the test requirements of the American National Standards Institute (ANSI) standard Z 97.1 [Ind 51.27 (5)], or other equivalent standard. The label shall be legible and visible after installation.

(2) **GUARDING OF GLAZING.** All interior and exterior glazed panels subject to human impact not in a hazardous impact location shall be guarded or provided with safety glazing, except that glazed panels with a sill height of 2 feet or more, or glazed panels less than 12 inches in width, are not required to be safety glazed or guarded.

(a) Guarding shall consist of a horizontal bar, rail, mullion, grille or screen at least 1½ inches wide and located within 3 feet 6 inches to 4 feet 6 inches above the floor. The guard assembly shall be capable of withstanding a lateral force of 100 pounds applied at any point and installed to avoid contact with the glazing when the force is applied.

(b) Safety glazing materials shall conform with the requirements of Ind 51.14 (1) (b).

(c) For replacement of glazing in buildings contracted for or existing prior to November 30, 1976, the installation of a vertical or horizontal bar, rail, mullion, grille or screen as a protective device may be provided in lieu of safety glazing material in hazardous impact locations where safety glazing would be impractical because of the size of the light required.

(3) **INTERIOR DOORS WITH GLASS LIGHTS.** (a) All interior doors with glass lights greater than 8 inches in the least dimension shall be provided with safety glazing material.

(b) All interior doors with glass lights less than 8 inches in the least dimension shall be provided with ¼-inch glazing material.

(c) Safety glazing materials shall conform with the requirements of Ind 51.14 (1) (b).

(4) **SKYLIGHTS AND SLOPED GLAZING.** (a) *Skylights.* All glazing in skylights shall be safety glazing material and shall comply with the requirements of Ind 51.02 (6).

(b) *Sloped glazing.* All glazing installed more than 15° with the vertical shall be safety glazing material. This rule does not apply to greenhouses.

(5) **FIRE WINDOW ASSEMBLIES.** All glazing in fire window assemblies shall be designed and installed in accordance with the requirements of Ind 51.048.

*See Appendix A for further explanatory material.

(6) **STRUCTURAL REQUIREMENT.** Glazing material shall be designed and installed to safely withstand the loads specified in chapter Ind 53 of this code.

Note: Section 101.125, Wis. Stats., requires safety glazing in all hazardous locations.

History: Cr. Register, December, 1974, No. 228, eff. 1-1-75; am. (5), Register, December, 1975, No. 240, eff. 1-1-76; am. Register, December, 1976, No. 252, eff. 1-1-77; cr. (1) (a) 3, Register, December, 1977, No. 264, eff. 1-1-78.

Ind 51.15 Standard exit. (1) Every door which serves as a required exit from a public passageway, stairway or building shall be a standard exit door unless exempted by the occupancy requirements of this code.

Note: For required exits see Wis. Adm. Code sections Ind 54.06, 55.10, 56.08 and 57.09.

(2) Every standard exit door shall swing outward or toward the natural means of egress (except as below). It shall be level with the floor, and shall be so hung that, when open, it will not block any part of the required width of any other doorway, passageway, stairway or fire escape. No revolving door, and no sliding door except where it opens onto a stairway enclosure or serves as a horizontal exit, shall be considered as a standard exit door.

(3) A standard exit door shall have such fastenings or hardware that it can be opened from the inside by pushing against a single bar or plate or turning a single knob or handle.

(a) The use of a key for opening door from the inside is prohibited.

1. *Exception.* Upon written request by the owner, key-locking, or securing, of exits may be approved in fire-resistive buildings, or parts of fire-resistive buildings, accommodating occupants who must be detained in order to protect the occupants or the public from physical harm.

Note #1: Subsection Ind 51.15 (3) (a) 1. is intended to apply only to jails, prisons, mental institutions, asylums, nursing homes with senile patients, and similar type occupancies.

Note #2: The owner's request should include the following considerations: accessibility of keys to the fire department and staff personnel for the locked areas; electrical devices which release the locks; and 24-hour supervision of the locked areas by personnel who carry keys for the locked areas while on duty. Electrical devices which release the locks upon power failure or upon activation of the fire alarm or sprinkler system or the product of combustion detectors should be considered for securing of exits in nursing homes.

Note #3: Written approval to lock exits must also be obtained from the department of health and social services in accordance with the rules of that department.

(b) The door shall not be barred, bolted or chained at any time.

1. *Exception:* When authorized persons (employees, frequenters, patrons, etc.) are not present, the exit door may be secured by the use of a single bar or bolt.

Note: The intent of this rule is to prohibit padlocks or use of a key to open a door or lock at any time. The bar and bolt exception is to give added security against intruders from the outside while protecting persons in the building from being trapped.

*See Appendix A for further explanatory material.

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