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Reg. # 322

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Heating, Ventilating and Air Conditioning Ind 64

outside air shall be provided to satisfy the requirements found in chs. Ind 1000-2000, Wis. Adm. Code.

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

**Ind 64.64 Automobile showrooms.** (1) **SCOPE.** This classification includes all showrooms with offices and occupancies adjacent to repair or live storage areas.

**Note:** A live storage area is any area used for storage of fire trucks, tractors, automobiles, trucks, and similar self-propelled vehicles which are driven in and out of the storage area under their own power; it does not include areas where vehicles and equipment are stored for seasonal periods, or areas where vehicles are displayed without batteries and where the gasoline tanks of the vehicles are empty and free of fumes.

(2) **VENTILATION.** The air movement, supply and distribution shall be provided in accordance with the requirements of s. Ind 64.05, Table 1.

(a) *Separate ventilating system.* A separate ventilating system shall be provided for showrooms or offices where such occupancies are adjacent to repair or live storage areas.

**Note:** Ventilation is not required if an openable area is provided to conform with the requirements of s. Ind 64.07.

(b) *Recirculation.* Air shall not be recirculated from any repair, live storage or service area unless the total volume of air in circulation is in excess of the ventilation required. Excess air may be recirculated.

(c) *Contaminants.* If the provisions of this section do not provide sufficient ventilation to meet the standards for threshold limit values covered in chs. Ind 1000-2000—Safety and Health Code, Wis. Adm. Code, the additional exhaust requirements with an equivalent volume of outside air shall be provided to satisfy the requirements found in chs. Ind 1000-2000, Wis. Adm. Code.

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

**Ind 64.65 General sanitation and service areas.** (1) **SCOPE.** This classification shall include toilet rooms, locker rooms, shower rooms and janitor closets.

**Note #1:** A janitor closet is a service closet with one or more plumbing fixtures.

**Note #2:** For exhaust ventilation requirements in hospital service areas, see s. Ind 64.57.

**Note #3:** For exhaust ventilation requirements in places of employment, see s. Ind 64.54.

**Note #4:** The use of wall registers within 6 inches of the floor, baseboard registers, and floor registers is prohibited in these areas. (See s. Ind 52.57, Note.)

(2) **EXHAUST VENTILATING SYSTEMS.** Exhaust ventilating systems serving this class of occupancy shall not be used for any other service.

(3) **VENTILATION.** The air movement, supply and distribution shall be provided in accordance with the requirements of s. Ind 64.05, Table 1.

(a) *Exhaust ventilation.* Exhaust ventilation shall be provided for all areas of this class unless otherwise exempted. The volume of air exhausted shall be provided at a rate of not less than 2 cubic feet per minute per square foot of floor area, or 60 cubic feet per minute per fixture (water closets and urinals). Mechanical exhaust ventilation shall be installed in toilet rooms having more than one fixture (water closets and

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urinals). The effectiveness of the exhaust shall be greater than the supply.

(b) *Natural ventilation.* Exhaust ventilation is not required from toilet rooms having one water closet or one urinal, or from janitor closets having one service sink or receptor, provided the room has an outside window of at least 4 square feet with at least 2 square feet that is openable.

1. Exception. Mechanical exhaust ventilation may be omitted from toilet rooms or bathrooms having one water closet or urinal, or from janitor closets having one service sink or receptor, where an approved ductless air circulating and treatment device is provided.

**Note:** The department of health and social services prohibits the use of ductless air circulating and treatment devices in licensed hospitals and nursing homes.

(c) *Locker, shower and toilet room ventilation.* Adjoining locker, shower and toilet rooms shall be exhausted at the rate of 2 cubic feet per minute per square foot of area, based on the floor area of the largest space. The rooms shall be provided with tempered makeup air supplied directly from the outside or transferred from other areas of the building in accordance with the requirements of s. Ind 64.18. A negative pressure relationship shall be maintained in the shower and toilet rooms with respect to the locker room.

**History:** Cr. Register, December, 1975, No. 240, eff. 1-1-76; am. (1), cr. (3) (c) and r. (4), Register, December, 1976, No. 252, eff. 1-1-77; cr. (3) (b) 1, Register, December, 1977, No. 264, eff. 1-1-78; am. (3) (b) 1., Register, December, 1981, No. 312, eff. 1-1-82.

**Ind 64.66 Natatoriums.** (1) **POOL VENTILATION.** In natatoriums, a volume of tempered outside air supply and exhaust shall be provided at the rate of at least 2 cubic feet per minute per square foot of pool surface. The volume of tempered outside air and exhaust may be reduced to a minimum of one cubic foot per minute per square foot of pool surface provided humidity controls are used to limit the relative humidity to 60%.

(2) **AIR MOVEMENT.** The air movement in a natatorium shall be not less than 6 air changes per hour unless mechanical cooling is provided to satisfy the heat gain requirement for the space.

**History:** Cr. Register, December, 1976, No. 252, eff. 1-1-77.

**Ind 64.67 Kitchens** (1) **SCOPE.** This classification includes all areas where food is prepared (except in domestic science educational facilities from grades kindergarten through 12, and single unit apartments in hotels, motels and apartment buildings).

(2) **EXHAUST VENTILATION SYSTEMS.** Exhaust ventilation systems serving this occupancy shall not be used for any other service.

(a) *Required exhaust ventilation.* When cooking equipment is being operated, mechanical exhaust ventilation shall be provided at a rate not less than 2 cubic feet per minute per square foot of floor area for every occupied area within the scope of this section. When cooking equipment is not being operated, a minimum supply of outside air and exhaust at the rate of 5 CFM per person or natural ventilation as specified in s. Ind. 64.07 shall be provided during periods of occupancy.

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Appendix A

A-57.07 (3) CHANGES OF ELEVATION WITHIN INDIVIDUAL LIVING UNITS. Section Ind 57.07 (3) permits the steps, stairs and ramps within individual living units to conform with s. Ind 21.04 of the Uniform Dwelling Code. The following is a reprint of the subject rules:

**Ind 21.04 Stairs.** Every exterior or interior exit stairs shall conform to the requirements of this section. [See s. Ind 57.07 (3) (a)]

(1) **MINIMUM WIDTH.** Every required exit stairs shall measure at least 3 feet 0 inches in width, except that stairs leading to basements may measure 2 feet 8 inches in width.

(2) **HEADROOM.** Every stairs shall be provided with a minimum headroom clearance of 6 feet 4 inches. The minimum clearance shall be measured vertically from a line parallel to the edge of the treads to the ceiling or soffit directly above that line.

(3) **TREADS AND RISERS.** Risers shall not exceed  $8\frac{1}{4}$  inches in height, measured vertically from tread to tread. Treads shall be at least 9 inches wide, measured horizontally from riser to riser. There shall be no variation in uniformity exceeding  $\frac{3}{16}$  inch in the depth of tread or in the height of risers. No flight of stairs shall exceed 12 feet in height vertically unless landings are provided.

(4) **LANDINGS.** (a) *Intermediate landings.* Intermediate landings located in a flight of stairs shall be at least as wide as the stairs and shall measure at least 3 feet 0 inches in the direction of travel. Trim and handrails may project no more than  $\frac{3}{8}$  inches into the required width.

(b) *Landings at the top and base of stairs.* A level landing shall be provided at the top and at the base of every stairs. The landing shall be at least as wide as the stairs and shall measure at least 3 feet 0 inches in the direction of travel.

(c) *Doors at landings.* Where a door is provided at the head or foot of a stairs, a level landing on each side of the door shall be provided between the door and the stairs, regardless of the door swing.

1. **Exception.** No landing shall be required between the door and the basement stairs or stairs leading to a garage, provided the door does not swing over the stairs.

2. **Exception.** A storm door or screen door shall be permitted to swing over an exterior platform or sidewalk provided the platform or sidewalk is located not more than  $8\frac{1}{4}$  inches below the floor level and provided the platform has a length at least equal to the width of the door.

(5) **HANDRAILS AND GUARDRAILS.** (a) *Handrails.* Every stairs of more than 3 risers shall be provided with at least one handrail. Handrails shall be provided on all open sides.

(b) *Guardrails.* All openings between floors, open sides of landings, platforms, balconies or porches which are more than 24 inches above grade or a floor shall be protected with guardrails.

(c) *Handrail and guardrail details.* 1. **Height.** Handrails shall be located at least 30 inches, but not more than 34 inches, above the upper surface of the tread. Guardrails shall be located at least 36 inches above the upper surface of the floor.

2. [See s. Ind 57.07 (3) (b)]

3. **Clearance.** The clearance between the handrail and the wall surface shall be at least  $1\frac{1}{2}$  inches.

(6) **WINDERS.** Winder steps may be used in required exit stairs where the length of the tread is at least 3 feet 0 inches and the wider tread measures at least 7 inches in width at a point one foot from the narrow end of the tread.

(7) **SPIRAL STAIRS.** Spiral stairs may be used as required exit stairs. The tread shall measure at least 26 inches from the outer edge of the supporting column to the inner edge of the handrail and at least 7 inches in width at a point one foot from the narrow end of the tread.

A-57.11 The intent of this section is to apply to floor levels not more than one story below grade (at building).

A-57.11 (1) (f) It is the intent of this subsection that each living unit needs only one means of exit from within the unit and that the entire building be provided with no less than 2 exits.

A-59.14 (2) (c) *Exit distance.* See the information and illustration contained in A-54.02 (4).

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**A-60.19 (4)** The standard is available from the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

**A-60.24** Class A fires are fires in ordinary combustible materials such as wood, cloth, paper, rubber, and many plastics. Class B fires are fires in flammable liquids, gases and greases.

**A-60.35** See A-60.24.

**A-60.36 (1) (a).** See A-60.19 (4).

**A-62.25 (1) CLEARANCE LIMITATIONS.** The intent is to require the minimum 7 feet 0 inches clearance only in traffic lanes and in all areas normally used by the public to leave from and return to their vehicles.

**A-63.41 Form.** Copies of the following form (SBD 5315) are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707. This form may be used to verify compliance with the illumination requirements of this section.