

Chapter ILHR 14

FIRE PREVENTION

- Subchapter I—Purpose and Scope**
 ILHR 14.001 Purpose (p. 2)
 ILHR 14.002 Scope (p. 2)
- Subchapter II—Definitions**
 ILHR 14.01 Definitions (p. 3)
- Subchapter III—Administration and Enforcement**
 ILHR 14.02 Duties of the fire department (p. 4)
 ILHR 14.03 Public fire education-related activities (p. 6)
 ILHR 14.04 Recordkeeping (p. 7)
 ILHR 14.05 Local regulations (p. 7)
 ILHR 14.06 Revocation of approval (p. 7)
 ILHR 14.07 Appeals (p. 7)
 ILHR 14.08 Petition for variance (p. 8)
 ILHR 14.09 Penalties (p. 8)
- Subchapter IV—General Precautions Against Fire**
 ILHR 14.12 Open burning (p. 8)
 ILHR 14.13 Bonfires (p. 9)
 ILHR 14.14 Kindling of fire (p. 9)
 ILHR 14.15 Handling of burning material (p. 9)
 ILHR 14.16 Hot ashes and other dangerous materials (p. 9)
 ILHR 14.17 Use of incinerators prohibited (p. 10)
 ILHR 14.18 Miscellaneous use of torches and welding equipment (p. 10)
 ILHR 14.19 Asphalt or tar kettles (p. 10)
 ILHR 14.20 Accumulation of waste (p. 11)
 ILHR 14.21 Handling and storage of combustible materials (p. 11)
 ILHR 14.22 Cleanliness (p. 12)
 ILHR 14.23 Prohibition of smoking (p. 12)
 ILHR 14.24 Open flame or light (p. 13)
 ILHR 14.25 Matches (p. 13)
 ILHR 14.26 Dilapidated or vacant buildings (p. 13)
 ILHR 14.27 Extension cords (p. 14)
- Subchapter V—Building Components and Construction**
 ILHR 14.31 Chimneys and heating appliances (p. 15)
 ILHR 14.32 Service equipment areas (p. 16)
 ILHR 14.33 Interior finishes and flammable and decorative materials (p. 16)
 ILHR 14.34 Fire-resistive construction and components (p. 17)
- Subchapter VI—Fire Prevention, Detection and Protection Systems**
 ILHR 14.35 General requirements (p. 18)
 ILHR 14.36 Automatic fire sprinkler systems (p. 18)
 ILHR 14.37 Standpipe systems (p. 18)
 ILHR 14.38 Manual fire alarm systems (p. 18)
- ILHR 14.39 Smoke detection systems, heat detection systems, smoke detectors and heat detectors (p. 18)
 ILHR 14.40 Portable fire extinguishers (p. 18)
 ILHR 14.41 Other fire safety devices (p. 18)
 ILHR 14.42 Test records (p. 19)
 ILHR 14.43 Servicing of fire protection systems (p. 19)
 ILHR 14.44 Buildings under construction (p. 19)
 ILHR 14.45 Vacant buildings (p. 20)
 ILHR 14.46 Buildings under demolition (p. 20)
- Subchapter VII—Means of Egress**
 ILHR 14.47 General requirements (p. 20)
- Subchapter VIII—Flammable and Combustible Liquids**
- Subchapter IX—Oil Burning Equipment**
- Subchapter X—Organic Coatings**
- Subchapter XI—Hazardous Materials and Chemicals**
- Subchapter XII—Application of Flammable Finishes**
- Subchapter XIII—Service Stations and Garages**
- Subchapter XIV—Liquefied Petroleum Gases**
- Subchapter XV—Liquefied Natural Gas**
- Subchapter XVI—Compressed Natural Gas**
- Subchapter XVII—Public Buildings and Places of Employment**
 ILHR 14.48 General requirements (p. 21)
- Subchapter XVIII—Bowling Establishments**
 ILHR 14.49 Prior notification (p. 21)
 ILHR 14.50 Prohibitions during lane resurfacing operations (p. 21)
- Subchapter XIX—Tents and Air-Supported Structures**
 ILHR 14.51 General requirements (p. 21)
 ILHR 14.52 Parking of vehicles (p. 22)
 ILHR 14.53 Flame retardant treatment (p. 22)
 ILHR 14.54 Smoking and open flame (p. 22)
 ILHR 14.55 Fire extinguishers and other fire protection equipment (p. 22)
 ILHR 14.56 Abatement of special fire or panic hazards (p. 23)
 ILHR 14.57 Flammable and combustible liquids (p. 23)
 ILHR 14.58 Housekeeping (p. 23)
- Subchapter XX—Dry Cleaning Plants**
- Subchapter XXI—Lumber Yards**
 ILHR 14.59 Open yard storage and drive-ways (p. 23)

ILHR 14

ILHR 14.60	Operational Fire Hazards (p. 23)	Subchapter XXIII—Fireworks	
ILHR 14.61	Smoking prohibited (p. 24)	Subchapter XXIV—Explosives, Ammunition & Blasting	
ILHR 14.62	Yards (p. 24)	Subchapter XXV—Combustible Fibers	
ILHR 14.63	Removal of debris (p. 24)	ILHR 14.68	Scope (p. 25)
ILHR 14.64	Fire extinguishing equipment (p. 24)	ILHR 14.69	Storage (p. 25)
Subchapter XXII—Woodworking Plants		ILHR 14.70	Special baling conditions (p. 26)
ILHR 14.65	Scope (p. 24)	Subchapter XXVI—Dust Explosion Hazards	
ILHR 14.66	Refuse removal (p. 24)	ILHR 14.71	General requirements p. 26)
ILHR 14.67	Fire protection (p. 24)	ILHR 14.72	Fire safety requirements (p. 26)

Notes

Subchapter I — Purpose and Scope

ILHR 14.001 Purpose. The purpose of this chapter is to protect the health, safety and welfare of the public and employes by establishing minimum standards for the prevention of fire.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.002 Scope. (1) **GENERAL.** The provisions of this chapter shall apply to all public buildings and places of employment.

(2) **EXEMPT BUILDINGS.** The following buildings and uses are not public buildings or places of employment and are not subject to the provisions of this chapter:

(a) One- and 2-family dwellings and outbuildings in connection with the dwellings, including but not limited to, barns and private garages;

(b) Buildings used exclusively for farming as specified in s. 102.04 (3), Stats.;

Note: A reprint of s. 102.04 (3), Stats., is included in the Appendix.

(c) Buildings used primarily for housing livestock or for other agricultural purposes, located on research or laboratory farms of public universities or other state institutions;

(d) Temporary buildings, used exclusively for construction purposes, not exceeding 2 stories in height, and not used as living quarters;

(e) Buildings located on Indian reservation land held in trust by the United States;

(f) Buildings owned by the federal government. Buildings owned by other than the federal government and leased to the federal government are not exempt;

(g) Bed and breakfast establishments; and

(h) Community-based residential facilities located in existing buildings and providing care, treatment and services to 3 to 8 unrelated adults.

(3) **RETROACTIVITY.** (a) Except as provided in par. (b), the provisions of this chapter shall apply to all public buildings and places of employment, whether constructed before, on or after May 1, 1989.

(b) 1. Paragraph (a) does not apply to any provision in this chapter that specifically excludes retroactive application of that provision.

2. Those provisions of this chapter which cross-reference provisions of other Wisconsin administrative code chapters shall be applied as specified in the scope and application provisions of the chapter which is cross-referenced.

Note: For example, the scope and application provisions of the Wisconsin Administrative Building and Heating, Ventilating and Air Conditioning Code, chs. ILHR 50-64, indicate that the building must be constructed and maintained in accordance with the code in effect at the time of construction. Subsequent alterations, remodeling or additions must conform to the code in current effect at the time of their construction.

(4) APPLICATION. Where different provisions of this chapter specify different requirements, the most restrictive requirement shall govern.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter II — Definitions

ILHR 14.01 Definitions. In this chapter:

(1) "Approved" means acceptable to the department or to the fire chief having jurisdiction.

(2) "Automatic fire sprinkler system" means an integrated system of underground and overhead piping for fire protection purposes, 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 supply side of an approved gate valve 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.

(3) "Automatic fire suppression system" means a mechanical system designed and equipped to detect a fire, actuate an alarm and suppress or control a fire using water, water spray, foam, carbon dioxide, halogenated agent or other approved suppression agent.

(4) "Bed and breakfast establishment" means any place of lodging that provides 8 or fewer rooms for rent, is the owner's personal residence and is occupied by the owner at the time of rental.

(5) "Bonfire" means a large open-air fire kindled to mark a public event, victory celebration or similar occurrence where dry, combustible material such as wood, paper and similar items are burned.

(6) "Building" or "structure" means a public building or place of employment.

(7) "Decorative material" means all materials such as curtains, draperies, streamers, and surface coverings that are applied over the building finish for decorative, acoustical or other effect. Also included are cloth, cotton batting, straw, vines, leaves, trees and moss used for decorative effect.

(8) "Department" means the department of industry, labor and human relations.

(9) "Existing" means completed or in use or occupied prior to the effective date of applicable provisions of this chapter.

(10) "Family" means 2 or more individuals who are related to each other by blood, marriage, adoption or legal guardianship. For purposes of this chapter, a group of not more than 4 persons not necessarily related by blood or marriage, living together in a single living unit will be considered equivalent to a single family.

(11) "Fire chief" means the chief or authorized representative of the fire department serving the unit of government having authority over the public building or place of employment. Fire chief also means the representative designated by the local unit of government to carry out the duties of this chapter.

(12) "Flammable" means subject to easy ignition and rapid-flaming combustion.

(13) "Listed" means included in a list published by a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

(14) "Open burning" means a controlled, limited size open-air fire except for outdoor cooking, campfires, burning for the purpose of land clearing, burning related to fire department training or similar purposes.

(15) "Place of employment" means every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming.

(16) "Public building" means any structure, including exterior parts of the structure, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter III — Administration and Enforcement

ILHR 14.02 Duties of the fire department. (1) **AUTHORIZED DEPUTY OF THE DEPARTMENT.** The fire chief of the fire department in every city, village or town, except cities of the first class, is a duly authorized deputy of the department.

(2) **FIRE PREVENTION INSPECTIONS.** (a) *General.* The chief of the fire department shall be responsible for having all public buildings and places of employment inspected for the purpose of ascertaining and causing to Register, August, 1993, No. 452

be corrected any conditions liable to cause fire, or any violations of any law or ordinance relating to fire hazards or to the prevention of fires.

(b) *Determining the number of buildings to be inspected.* The fire chief shall be responsible for determining the number of public buildings and places of employment to be inspected for each municipality for which the fire department has responsibility.

(c) *Scheduling of inspections.* Except as provided in par. (d), fire prevention inspections shall be conducted at least once in each nonoverlapping 6-month period per calendar year, or more often if ordered by the chief of the fire department, in all territory served by the fire department.

(d) *Exceptions.* 1. In first class cities, the fire chief may establish the schedule of fire inspections. The fire chief shall base the frequency of the inspections on hazardous classification, the proportion of public area, the record of fire code violations, the ratio of occupancy to size and any other factor the chief deems significant. Property other than residential property with 4 dwelling units or less shall be inspected at least once annually.

2. In municipalities other than first class cities, the following types of occupancies shall be inspected at least once per year:

a. Offices, outpatient clinics and dental clinics, if less than 3 stories in height.

b. Telephone exchange complexes.

c. Places of worship that do not have a rental hall, child day care facility or preschool to 12th grade instruction within the immediate church building.

d. School buildings at colleges and universities, if used exclusively for classroom lecture or offices.

Note: School buildings containing rooms such as laboratories, chemical storage and industrial arts would require 2 inspections per year.

e. Libraries, museums and art galleries.

f. Hotels and motels, if less than 3 stories in height.

g. Townhouses and rowhouses, if less than 3 stories in height.

h. Condominiums and apartments, if there are less than 5 units under one roof.

i. Convents and monasteries.

j. Detention and correctional facilities.

k. Garages for storage only.

l. Specialty occupancies covered under ch. ILHR 62.

3. Upon written request by the chief of a fire department, the department by special order may grant an exception to a city, village or town to conduct less frequent inspections than required under this subsection.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92; am. (2) (a), r. and recr. (2) (c) and (d), Register, August, 1993, No. 452, eff. 9-1-93.

ILHR 14.03 Public fire education services. Fire departments shall provide public fire education services. The services may be selected from the following public fire education-related activities, or other activities may be completed if developed in consultation with the department:

(1) **FIRE INSPECTOR TRAINING.** All fire department personnel directly involved in conducting fire inspections are authorized by the department and by the fire chief to conduct the inspections upon completion of required training approved by the department and by the fire chief.

(2) **FIRE PREVENTION WEEK PROGRAM.** Fire departments complete any combination of the following activities during national fire prevention week: children's poster contest; fire department open house; school visits to teach children fire safety; fire department fire safety demonstrations, including but not limited to fire fighting demonstrations, fire extinguisher and smoke detector demonstrations, "stop/drop/roll" demonstrations; or an activity that specifically ties in with the national fire prevention week theme.

(3) **RESIDENTIAL FIRE INSPECTION PROGRAM.** Fire departments advertise and conduct residential fire inspections on a request basis or in response to local ordinance.

(4) **BUILDING PLAN REVIEW PROGRAM.** Fire departments conduct plan reviews prior to construction of public buildings and places of employment.

(5) **SCHOOL EDUCATION PROGRAM.** Fire departments conduct approved fire safety education programs in the school districts for which they have responsibility.

(6) **CONTINUING PUBLIC FIRE EDUCATION PROGRAM.** Fire departments conduct public fire education programs. The programs may include monthly public service announcements for radio or television, monthly newspaper articles, booths at fairs, demonstrations at shopping centers, billboards with fire safety messages and similar activities acceptable to the department.

(7) **PUBLIC FIRE EDUCATION SPEAKING BUREAU.** Fire departments organize a group of speakers to make public fire education presentations to civic organizations, professional organizations, school organizations and similar groups.

(8) **YOUTH FIRE AWARENESS PROGRAM.** Fire departments conduct youth fire awareness programs, including but not limited to skill award and merit badge clinics for scouts, junior fire marshal program, juvenile fire starter program, first aid and CPR training and related activities.

(9) **FIRE EXTINGUISHER TRAINING PROGRAM.** Fire departments conduct training programs for the public or industry regarding the operation of fire extinguishers. Industrial fire brigade training programs may be conducted to complete this activity.

(10) **OCCUPANCY INSPECTION PROGRAM.** Fire departments conduct inspections of public buildings and places of employment prior to the issuance of local occupancy permits. Written documentation of the inspections are kept by each fire department.

(11) **SMOKE DETECTOR AWARENESS PROGRAM.** Fire departments conduct programs to inform people regarding the effectiveness and proper

installation of smoke detectors in residential buildings, public buildings and places of employment.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92; r. and recr., Register, August, 1993, No. 452, eff. 9-1-93.

ILHR 14.04 Record keeping. (1) **GENERAL.** The following records shall be generated and maintained by each fire department:

- (a) Current roster of active fire department members;
- (b) Date and location of the fire prevention inspections conducted, violations found and corrective actions taken;
- (c) Time, date and location of fires, and number of fire department members responding;
- (d) Number and duration of, and attendance at, fire department meetings;
- (e) Number and duration of, topic of and attendance at fire department training sessions; and
- (f) Number, type, and duration of and attendance at public fire education related activities.

(2) **AVAILABILITY OF RECORDS.** The records specified in sub. (1) shall be made available upon request to the fire department.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.05 Local regulations. This chapter shall not limit the power of cities, villages and towns to make, or enforce, additional or more stringent regulations, provided the regulations do not conflict with this chapter or with any other rule of the department or law.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.06 Revocation of approval. The department or authority having jurisdiction may revoke any approval, issued under the provisions of this chapter, for any false statements or misrepresentation of facts on which the approval was based.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.07 Appeals. Any person affected by any local order as defined in s. 101.01 (1) (f), Stats., which is in conflict with a rule of the department may petition the department for a hearing on the grounds that the local order is unreasonable or in conflict with the rule of the department or both.

Note: Section 101.01 (1) (f), Stats., defines "local order" as any ordinance, order, rule or determination of any common council, board of alderpersons, board of trustees or the village board, of any village or city, or the board of health of any municipality, or an order or direction of any official of such municipality, upon any matter over which the department has jurisdiction.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92, correction made under s. 13.93 (2m) (b) 7, Stats., Register, August, 1993, No. 452.

ILHR 14.08 Petition for variance. (1) **PROCEDURE.** The department shall consider and may grant a variance to a provision of this chapter upon receipt of a fee, a completed petition for variance form from the owner, and a position statement from the fire department having responsibility and an interest in the provision, provided an equivalency is es-

tablished in the petition for variance which meets the intent of the provision being petitioned. The department may impose specific conditions in a petition for variance to promote the protection of the health, safety or welfare of the employes or the public. Violation of any condition under which the petition for variance is granted constitutes a violation of this chapter.

Note 1: See Appendix for an example of the petition for variance (form SB-8) and the fire department position statement (form SB-8A).

Note 2: Section 101.02 (6), Stats., and ch. ILHR 3 outline the procedure for submitting petitions to the department and the department procedures for hearing petitions.

(2) **PETITION PROCESSING TIME.** Except for priority petitions, the department shall review and make a determination on a petition for variance within 30 business days of receipt of all calculations, documents and fees required to complete the review. The department shall process priority petitions within 10 business days.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.09 Penalties. Penalties for violations of this chapter shall be assessed in accordance with s. 101.02, Stats.

Note 1: Section 101.02 (13) (a), Stats., indicates penalties will be assessed against any employer, employee, owner or other person who fails or refuses to perform any duty lawfully enjoined, within the time prescribed by the department, for which no penalty has been specifically provided, or who fails, neglects or refuses to comply with any lawful order made by the department, or any judgment or decree made by any court in connection with ss. 101.01 to 101.25. For each such violation, failure or refusal, such employee, owner or other person must forfeit and pay into the state treasury a sum not less than \$10 nor more than \$100 for each violation.

Note 2: Section 101.02 (12), Stats., indicates that every day during which any person, persons, corporation or any officer, agent or employe thereof, fails to observe and comply with an order of the department will constitute a separate and distinct violation of such order.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter IV — General Precautions Against Fire

ILHR 14.12 Open burning. (1) **PRIOR APPROVAL.** (a) Except as provided in par. (b), all persons shall obtain authorization from the fire chief before kindling or maintaining any open burning or authorizing the kindling or maintaining of any open burning within the limits of any incorporated city or village.

(b) The following open burning shall be permitted without authorization from the fire chief:

1. Outdoor cooking;
2. Campfires; and
3. Burning related to training for fire departments.

Note: Burning outside the incorporated limits of cities and villages is regulated by the department of natural resources under ch. NR 30 - Forest Fire Control and ss. 26.11 to 26.13, Stats.

(2) **OTHER REGULATIONS.** Open burning shall also be subject to the administrative rules of the department of natural resources and ordinances or regulations of the local authority having jurisdiction.

(3) **PROHIBITION.** Outdoor burning shall be prohibited when local circumstances make the fires potentially hazardous. Local circumstances
Register, August, 1993, No. 452

include, but are not limited to, thermal inversions, wind, ozone alerts, and very dry conditions.

Note: Outdoor burning may be prohibited by the department of natural resources due to air quality considerations.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.13 Bonfires. (1) **PRIOR APPROVAL.** All persons shall obtain authorization from the fire chief before kindling or maintaining any bonfire or authorizing the kindling or maintaining of any bonfire on any premises.

(2) **QUANTITY OF MATERIAL TO BE BURNED.** The allowable quantity of material to be burned shall be determined by the fire chief and shall be based upon the fire safety considerations of the situation and the desired duration of burn.

(3) **MATERIAL FOR BURNING.** (a) Fuel for bonfires shall consist of dry material only and shall not be ignited with flammable or combustible liquids.

(b) Material for bonfires may not include rubbish, garbage, trash, any material made of or coated with rubber, plastic, leather or petroleum based materials and may not contain any flammable or combustible liquids.

(4) **OTHER REGULATIONS.** Persons kindling or maintaining bonfires or authorizing the kindling or maintenance of bonfires shall be subject to the ordinances and regulations of the fire department having jurisdiction.

Note: See ch. NR 30 - Forest Fire Control and ss. 26.11 to 26.13, Stats., for regulations pertaining to burning in areas outside the incorporated limits of cities and villages.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.14 Kindling of fire. The kindling of fire shall comply with ss. 941.11, 943.02 and 943.03, Stats.

Note: See Appendix for reprint of ss. 941.11, 943.02 and 943.03, Stats.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.15 Handling of burning material. The handling of burning material shall comply with ss. 941.10 and 943.05, Stats.

Note: See Appendix for reprint of ss. 941.10 and 943.05, Stats.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.16 Hot ashes and other dangerous materials. (1) **GENERAL.** Except as provided in sub. (2), no person may deposit hot ashes or cinders, smoldering coals, or greasy or oily substances liable to spontaneous ignition, into any combustible receptacle or place these materials within 15 feet of any combustible materials.

(2) **METAL OR NONCOMBUSTIBLE RECEPTACLES.** Hot ashes or cinders, smoldering coals or greasy or oily substances liable to spontaneous ignition placed in metal or noncombustible, covered receptacles are exempt from the provisions of sub. (1), providing the following conditions are satisfied:

ILHR 14

(a) The receptacle is resting upon a noncombustible floor or on the ground outside the building or is placed on a noncombustible stand; and

(b) The receptacle is kept at least 15 feet away from any combustible material, combustible wall or partition, exterior window opening, exit access or exit.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.17 Use of incinerators prohibited. If the fire chief determines that burning in an incinerator during a period of high fire hazard weather conditions will create an undue fire hazard, use of the incinerator shall be prohibited.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.18 Miscellaneous use of torches and welding equipment. (1) **GENERAL.** Any person using a torch or other flame-producing device for removing paint from any building or structure within the scope of this chapter or for sweating pipe joints, cutting, heat welding seams, thawing pipes, building construction or demolition shall provide at least one approved minimum 2-A water type fire extinguisher, minimum 4-A dry chemical type fire extinguisher, or minimum ½ inch diameter water hose connected to the water supply at the site where the burning is done.

Note: See Appendix for a reprint of Section 1926.352 of the Federal Occupational Safety and Health Administration regulations, relating to the use of welding and cutting equipment.

(2) **ATTENDANCE.** A firewatch shall be maintained in effect for at least ½ hour after each use of the torch or flame-producing device under sub. (1).

(3) **ELECTRIC WELDING.** The provisions of subs. (1) and (2) shall apply to the uses specified in sub. (1) applicable to electric welding equipment.

(4) **STORAGE.** Storage of fuel gases, oxygen and calcium carbide for gas welding and cutting shall satisfy the following requirements:

(a) All gas cylinders shall be secured to prevent falling.

(b) Cylinders stored outside shall be protected from accumulations of ice and snow.

(c) Cylinders stored inside of buildings shall be segregated from highly combustible materials and operations likely to cause an excessive rise in temperature or mechanical damage.

(d) Inside storage of fuel gases and oxygen shall be separated by a minimum of 20 feet or by a 1/2-hour fire-resistive partition.

(5) **HAND TRUCKS.** Hand trucks for portable gas welding and cutting equipment shall be provided with chains or steadying devices to prevent cylinders from being knocked over while being moved or while in use.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92; cr. (4) and (5), Register, August, 1993, No. 452, eff. 9-1-93.

ILHR 14.19 Asphalt or tar kettles. (1) **PROHIBITED LOCATIONS.** (a) Subject to par. (b), an asphalt or tar kettle may not be used inside of or on the roof of any building.

(b) Asphalt or tar kettles may be used on the roofs of buildings in excess of 60 feet in height if all of the following conditions are met:

Register, August, 1993, No. 452

1. The asphalt or tar kettle is taken to the roof outside the building;
2. All roof scuppers are closed during the roofing or repair operation;
3. The asphalt or tar kettle is located on a noncombustible platform surface which is a minimum of 8 inches above the roof surface and which extends at least 2 feet beyond the exterior of the asphalt or tar kettle;
4. A source of water of at least 25 gallons per minute is available on the roof; and
5. The asphalt or tar kettle is empty, or the heat source is shut off and the contents solidified, while hoisting.

(2) **FIRE EXTINGUISHERS.** There shall be at least one approved fire extinguisher of a minimum 20-B:C classification within 30 feet of each asphalt or tar kettle during the period that the kettle is in use.

Note: See ch. ILHR 11 and NFPA Standard 58 for additional rules pertaining to LP-fired asphalt or tar kettles.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.20 Accumulation of waste. (1) **GENERAL.** (a) Accumulations of litter or combustible or flammable waste may not be permitted to remain longer than 24 hours in any court, yard, vacant lot, alley, parking lot or open space unless in closed metal, noncombustible or other approved containers.

(2) **VEGETATION.** All weeds, grass, vines or other growth which endanger property through the spread of fire shall be cut down and removed.

(3) **STORAGE WITHIN BUILDINGS.** (a) All combustible rubbish or waste material not stored in approved covered, metal or noncombustible containers and not located in rooms of at least one-hour rated fire-resistive construction shall be removed from the building at least once every 24 hours.

Note: This rule is not intended to apply to storage of waste paper at individual work stations for recycling purposes.

(b) Oily waste and oily rags, when not in actual use, shall be kept in listed self-closing metal waste cans, set firmly on 3-inch legs or approved noncombustible containers and located at least 10 feet from any combustible materials.

(c) All chemically-soiled wastes with the potential for spontaneous combustion shall be kept in listed self-closing metal waste cans until removed from the building.

(4) **NUISANCE OR HAZARD.** Storage of waste may not produce conditions which in the opinion and judgment of the fire chief will tend to create a nuisance or a hazard to the public safety.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.21 Handling and storage of combustible materials. (1) **HANDLING.** Any person making, using, storing or having under their control any flammable or combustible materials shall, at the close of each day, cause all material which is not compactly baled and stacked in an orderly manner to be removed from the building or stored in a single portable metal bin of a size for one day's supply; in metal-lined, covered portable receptacles or bins; or in a hazard enclosure as specified in s. ILHR 54.14.

Register, August, 1993, No. 452

(2) **INSIDE STORAGE.** (a) Combustible storage in buildings shall be orderly, shall be more than 2 feet from the ceiling, and shall be so located as not to endanger exit from the building. A minimum of 18 inches clearance shall be maintained between the top of storage and ceiling sprinkler deflectors.

(b) Clearances between combustible materials and electric equipment shall be as specified in Section 110.16 of the National Electric Code as adopted by reference in ch. ILHR 16.

(3) **OUTSIDE STORAGE.** (a) Outside storage shall be so located as not to constitute a hazard to adjacent buildings or property and shall be compact and orderly.

(b) Individual piles shall not exceed 20 feet in height and shall be located at least 30 feet from buildings and so as to provide at least 15-foot wide driveways between piles.

(c) Driveways shall be so spaced that a maximum grid system unit of 50 feet by 150 feet is provided.

Note: See Appendix for diagram of acceptable sample layout of piles and driveways.

(d) Outside storage shall be prohibited within 3 feet of any property line and may not exceed 6 feet in height when within 15 feet of the property line, except where no hazard or menace of fire to adjoining property is created.

(e) Storage or accumulation of combustible waste matter, which constitutes a hazard or menace of fire, shall be removed within 24 hours.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.22 Cleanliness. Every public building and place of employment, including connecting yards, courts, passages, areas or alleys, shall be kept clean and orderly, and shall be kept free from any accumulation of dirt, filth, rubbish, garbage or other matter.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.23 Prohibition of smoking. (1) **GENERAL.** Smoking or carrying of lighted smoking materials shall be prohibited in public buildings and places of employment where flammable materials are handled, sold or stored.

(2) **DESIGNATED SAFE LOCATIONS.** The fire chief may designate specific safe locations in any building, structure or place in which smoking may be permitted.

(3) **"NO SMOKING" SIGNS.** "No Smoking" signs shall be posted in each building, structure, room or place in which smoking is prohibited.

(4) **REMOVAL OF SIGNS PROHIBITED.** No person may obscure, remove, deface, mutilate or destroy a posted "No Smoking" sign.

(5) **COMPLIANCE WITH "NO SMOKING" SIGNS.** No person may smoke, throw or deposit any lighted or smoldering substance in any place where "No Smoking" signs are posted.

(6) **ASH TRAYS.** Noncombustible ash trays shall be provided at locations where smoking is permitted. The ash trays shall be of a design and Register, August, 1993, No. 452

construction to prevent smoking materials from falling out of the ash tray.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.24 Open flame or light. (1) **GENERAL.** No person may take an open flame or nonapproved light into any room or area, or other place where flammable, highly combustible or explosive material is kept.

(2) **OPEN FLAME CANDLES AND FIXTURES.** (a) Except as provided in par. (b), the use of open flame candles or open flame fixtures in public buildings and places of employment shall be prohibited.

(b) 1. Open flame candles or open flame fixtures may be used in churches, fraternal lodges and other buildings as part of a religious, fraternal, or ceremonial ritual.

2. Candles may be used in restaurants, supper clubs and similar occupancies provided the candle is enclosed on all sides with glass or similar noncombustible material and the enclosure extends at least one inch above the tip of the flame.

3. Open flame candles and open flame fixtures may be used in the seating areas of public assembly buildings provided the following conditions are satisfied:

a. The stand upon which the candle is placed is a nontipping weighted stand or is securely attached to the end of fixed seating in at least 2 places;

b. The base of the candle is at least 78 inches from the floor;

c. The candle is guarded on top and sides at all times; and

Note: Compliance with this subparagraph may be attained by the use of a glass chimney and a perforated metal cap.

d. The aisle where the candles are placed is at least 5-foot wide.

4. Open flame food warming candles may be used in restaurants, supper clubs and similar occupancies.

5. The use of decorative or other lights, which are fueled by flammable or combustible liquids, may be used provided they are self-extinguishing.

(c) The use of open flames other than those uses specified in par. (b) shall be subject to the approval of the fire chief.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.25 Matches. The manufacture, storage and distribution of matches shall comply with s. 167.07, Stats.

Note: See Appendix for reprint of s. 167.07, Stats.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.26 Dilapidated or vacant buildings. (1) **DILAPIDATED BUILDINGS.** (a) Any building which for any reason is especially liable to fire and which is so located as to endanger other buildings or property shall be repaired and put in safe and sound condition or shall be torn down and all materials removed.

(b) Conditions considered especially liable to fire shall include, but are not limited to, the following:

1. Missing or rotten shingles or similar defects on the roof;
2. Loose, missing or rotten siding;
3. Unnecessary wall openings;
4. Broken plastering;
5. Holes in floors, ceilings or partitions;
6. Cracked or defective chimneys; and
7. Other conditions determined hazardous by the fire chief.

(c) The kind, form, manner or extent of repairs may be authorized by local ordinance when a building is damaged from any cause to an extent of more than 50% of its assessed value.

(d) Within 30 days of written notification, the owner of a dilapidated building as specified in par. (a) shall decide whether to repair or tear down the building. Within 30 days of the decision, the building shall be repaired or torn down and all materials removed.

Note: Section 66.05, Stats., addresses the topic of razing buildings.

(2) **VACANT BUILDINGS.** (a) Upon vacating or abandoning any premises, the owner shall remove any and all noxious and hazardous material or waste matter and the premises shall be left in a clean and neat condition.

(b) Every person owning or in charge of or control of any vacant building shall remove all accumulations of flammable or combustible waste or rubbish and shall securely lock, barricade or otherwise secure all doors, windows and other openings.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.27 Extension cords. (1) **DEFINITION.** In this section, "extension cord" means a cord set consisting of a length of flexible cord with an attachment plug at one end and a cord connector, which permits the connection of one or more attachment plugs, at the other end.

(2) **GENERAL.** (a) Extension cords shall be listed by Underwriters Laboratories or other approved nationally recognized testing agency.

Note: See Underwriters Laboratories standard UL 817- Cord Sets and Power Supply Cords for additional information.

(b) The current-carrying capacity of the extension cord shall not be exceeded.

(c) Extension cords shall be of a 3-wire grounding type when used in conjunction with devices equipped with 3-prong grounding type attachment plugs.

(d) Extension cords may not be multiplied or plugged into one another, except for temporary wiring at construction sites complying with Article 305 of the National Electrical Code as adopted by reference in ch. ILHR 16.

Register, August, 1993, No. 452

(3) **APPLICATION.** (a) Extension cords shall only be used for temporary wiring and shall not be substituted for permanent wiring.

(b) Extension cords shall be permitted only with portable appliances, hand tools or fixtures.

(c) Except for listed multitap extension cords with built-in overcurrent protection, each extension cord shall serve only one portable appliance, hand tool or fixture.

(d) Extension cords shall not be attached to structures or extended through walls, ceilings, floors, under or through doors, or floor coverings. Extension cords shall not be subject to environmental damage or physical impact.

(e) Extension cords may be used for temporary wiring at construction sites complying with Article 305 of the National Electrical Code as adopted by reference in ch. ILHR 16.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter V — Building Components and Construction

ILHR 14.31 Chimneys and heating appliances. (1) **INSTALLATION AND MAINTENANCE.** (a) All chimneys, smokestacks or similar devices for conveying smoke or hot gases to the outside and the stoves, furnaces, incinerators or boilers to which they are connected shall be constructed in accordance with ss. ILHR 64.45 to 64.50 and shall be maintained so as not to create a fire hazard.

Note: See Appendix for reprint of ss. ILHR 64.45 to 64.50.

(b) Chimneys or vents and connectors serving solid-fuel-burning appliances shall be cleaned and inspected for damage annually. The fire chief may require verification of cleaning and inspection in writing.

(c) Chimneys and vents, which have been subjected to a chimney fire, shall not be reused until inspected and repaired, if necessary.

(2) **EXISTING INSTALLATIONS.** (a) 1. Existing masonry chimneys which upon inspection are found to be without flue liners and with open mortar joints which will permit smoke or gases to be discharged into the building, or which are cracked as to be dangerous shall be made safe by means of a fire-clay liner, fire-brick, a corrosion-resistant metal pipe or other approved materials and otherwise repaired. If necessary, the chimney shall be removed or the chimney openings shall be effectively sealed to prevent further use.

2. Metal pipe liners shall be one inch less in diameter than the least dimension of the flue, and the entire space between the metal liner and the walls of the chimney shall be filled with cement mortar.

(b) Existing chimneys and vents of metal, which are corroded or improperly supported, shall be repaired or replaced.

(c) Existing chimney and vent connectors of metal, which are corroded or improperly supported, shall be replaced.

(3) **FOOD PREPARATION EQUIPMENT.** (a) Exhaust systems provided for food preparation equipment shall be maintained in a manner so as not to create a hazardous condition.

ILHR 14

Note: See s. ILHR 64.67 (6) for additional information. A reprint of s. ILHR 64.67 (6) is included in the Appendix. The effective date for s. ILHR 64.67 (6) requiring automatic fire suppression systems for exhaust hoods was July 1, 1983.

(b) Hoods, grease removal devices, fans, ducts and other devices shall be inspected and cleaned semi-annually or more often as needed to remove grease and deposits of residues. The fire chief may require verification of cleaning and inspection in writing.

(c) 1. Fire extinguishing systems shall be inspected semi-annually and checked for proper operation by a factory-authorized service representative. Inspections shall include a check that the supply of extinguishing agent in the system is adequate, and all actuation components are operating satisfactorily.

2. Fusible links shall be replaced at least annually.

3. A copy of the semi-annual inspection report shall, upon request, be sent to the fire department having jurisdiction.

(d) Instructions for manually operating the fire extinguishing system shall be posted conspicuously in the kitchen, and employes shall be trained in operating procedures.

(e) Any fire dampers, if employed, shall be tested semi-annually to insure proper functioning of all parts.

(4) **UNSAFE HEATING APPLIANCES.** (a) Any existing stove, oven, furnace, incinerator, boiler or any other heat producing device or appliance found to be defective or in violation of code requirements may not be used. The fire chief shall order the discontinuation of use with a written notice to the owner, firm, agent or operator of the equipment to cease use immediately.

(b) The fire chief shall take appropriate action when inspection shows the existence of an immediate fire hazard or that a device or appliance imperils life.

(c) The defective appliance shall remain withdrawn from service until all necessary repairs or alterations have been made.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92; am. (3) (b), Register, August, 1993, No. 452, eff. 9-1-93.

ILHR 14.32 Service equipment areas. (1) **ILLUMINATION.** Illumination shall be provided for all service equipment areas, motor control centers and electrical panelboards.

(2) **CLEARANCE.** (a) Clearance of not less than 36 inches shall be provided between all electrical service equipment and storage.

(b) Clearances to heat producing equipment shall be provided as specified in the listing for the equipment.

(3) **STORAGE PERMITTED.** Storage shall be permitted in the isolation of hazard rooms specified in chs. ILHR 54 to 62 provided the clearances to heat producing equipment as specified in sub. (2) (b) and in NFPA Standard 211 as adopted by reference in chs. ILHR 50 to 64 are maintained.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.33 Interior finishes and flammable and decorative materials. (1) **INTERIOR FINISH MATERIALS.** Interior finish materials installed in public Register, August, 1993, No. 452

buildings and places of employment since January 1, 1982, shall comply with the provisions of s. ILHR 51.07.

Note 1: Section ILHR 51.07 became effective on January 1, 1982 and applies only to finish materials installed after the effective date.

Note 2: See Appendix for reprint of s. ILHR 51.07.

(2) THEATERS AND ASSEMBLY HALLS. (a) Fabric decorations used in theaters and assembly halls shall be flameproofed.

(b) For fabrics treated on or after May 1, 1989, a tag or similar indication shall be affixed to the fabric and include the following information:

1. Date of flameproofing treatment;
2. Period of time for which the treatment is effective or expiration date when flameproofing is no longer effective; and
3. Name of person or firm responsible for the flameproofing treatment.

(c) Paper decorations and flammable decorative material used in theaters and assembly halls shall be flameproofed.

(3) CHRISTMAS TREES. Artificial Christmas trees, except those within individual living units, shall be flame retardant or nonflammable. Natural Christmas trees, except those within individual living units, shall have the trunk sawed off at least one inch above the original cut end and shall be cut immediately prior to being placed in a water-bearing stand. The water level shall always be above the cut.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.34 Fire-resistive construction and components. (1) GENERAL. Fire division walls, fire separation walls, occupancy separations and all other fire-resistive rated construction and components required by the provisions of chs. ILHR 50 to 64 shall be maintained.

(2) OPENINGS. (a) 1. Except as provided in subd. 2., all openings for doors and windows in required fire-rated construction shall be protected by fire door or fire window assemblies as specified in ss. ILHR 51.047 and 51.048, respectively.

2. Openings in the fire-resistive rated walls and partitions that are not firewalls need not be protected by fire door or fire window assemblies, as specified in s. ILHR 51.02 (5) and Table 51.03-B.

(b) All hardware needed for proper operation of fire door and fire window assemblies shall be maintained in good working order.

(c) The use of door stops, wedges and other nonapproved hold-open devices shall be prohibited on fire doors.

(d) No fire door may be blocked or obstructed or otherwise made inoperable.

(e) Approved hold-open devices and automatic door closers, if used, shall be maintained in good working order. During any period when the hold-open device or automatic door closer is out of service for repairs, the door it operates shall remain in the closed position.

(f) 1. Except as provided in subd. 2., all doors serving smokeproof stair towers or interior enclosed stairways shall be equipped with a self-closing

device or an automatic self-closing device actuated by products of combustion other than heat.

2. The self-closing device may be actuated by a rate-of-rise heat detector in those locations with smoke- or contaminated-filled environments.

(g) The doors protecting openings in vertical division walls of ch. ILHR 57 buildings and located in public corridors shall be held open and equipped with an automatic closing device activated by products of combustion other than heat.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter VI — Fire Prevention, Detection and Protection Systems

ILHR 14.35 General requirements. All fire prevention, detection and protection systems, including automatic fire sprinkler systems, automatic fire suppression systems, standpipe systems, manual fire alarm systems, smoke detection systems, smoke detectors, heat detection systems, heat detectors, portable fire extinguishers and related systems shall be designed, installed, maintained and tested as specified in this subchapter and chs. ILHR 50 to 64.

Note: See Appendix for reprint of ss. ILHR 51.21 to 51.245.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.36 Automatic fire sprinkler systems. Automatic fire sprinkler systems shall be tested, inspected and maintained as specified in NFPA No. 13A - Inspection, Testing and Maintenance of Sprinkler Systems, as adopted by reference in chs. ILHR 50 to 64.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.37 Standpipe systems. Standpipe systems shall be tested, inspected and maintained as specified in s. ILHR 51.21.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.38 Manual fire alarm systems. Manual fire alarm systems shall be tested, inspected and maintained as specified in NFPA No. 72A - Installation, Maintenance and Use of Local Protective Signaling Systems, as adopted by reference in chs. ILHR 50 to 64.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.39 Smoke detection systems, heat detection systems, smoke detectors and heat detectors. Smoke detection systems, heat detection systems, smoke detectors and heat detectors shall be tested, inspected and maintained as specified in NFPA No. 72E - Automatic Fire Detectors and NFPA No. 74 - Household Fire Warning Equipment, as adopted by reference in chs. ILHR 50 to 64.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.40 Portable fire extinguishers. Portable fire extinguishers shall be tested, inspected and maintained as specified in NFPA No. 10 - Portable Fire Extinguishers, as adopted by reference in chs. ILHR 50 to 64.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Register, August, 1993, No. 452

ILHR 14.41 Other fire safety devices. Special fire safety devices, including automatic smoke removal and control equipment, emergency generators and any other special fire safety equipment shall be operated at least semi-annually or in accordance with the manufacturer's recommendations by the owner or an authorized representative.

Note: See NFPA 92A - Recommended Practice for Smoke Control Systems, for further explanatory information.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Next page is numbered 19



ILHR 14.42 Test records. A complete written record of all tests and inspections required under this subchapter shall be maintained on the premises by the owner or occupant in charge of the premises, and all such records shall be submitted to the fire chief when requested for inspection and evaluation.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.43 Servicing of fire protection systems. (1) **GENERAL.** Except as provided in sub. (2), when any required fire alarm, fire communication, fire extinguishing, fire detecting, first-aid fire fighting system, device or unit, or part becomes inoperative and affects the fire safety of a building or structure or the occupants, the fire chief may order the building or structure or portion vacated until the inoperative system, device or unit is repaired and returned to full service.

(2) **EXCEPTION.** Buildings may be occupied during servicing of the systems specified in sub. (1) provided safety alternatives approved by the fire chief are utilized until the system is placed back in operation.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.44 Buildings under construction. (1) **GENERAL.** During the construction of a building and until the permanent fire-extinguishing system has been installed and is in service, fire protection shall be provided in accordance with this section.

(2) **WHERE REQUIRED.** (a) Every building 6 stories or more in height shall be provided with not less than one Class I standpipe for use during construction.

(b) The standpipes shall be installed when the progress of construction is not more than 50 feet in height above grade.

(c) The standpipe shall be provided with fire department inlet connections at accessible locations adjacent to usable stairs.

(d) The standpipe systems shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

(e) On each floor there shall be provided a 2½ inch valve outlet for fire department use. Where construction height requires installation of a Class II standpipe, fire pumps and water main connections shall be provided to serve the standpipe.

(3) **TEMPORARY STANDPIPES.** (a) Temporary standpipes may be provided in place of permanent systems if they are designed to furnish 500 gallons of water per minute at 50 pounds per square inch pressure with a standpipe size of not less than 4 inches.

(b) All outlets shall be not less than 2½ inches.

(c) Pumping equipment sufficient to provide the pressure and volume specified in par. (a) shall be available at all times when a Class III standpipe system is required.

(4) **DETAILED REQUIREMENTS.** Standpipe systems for buildings under construction shall be installed as required for permanent standpipe systems.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.45 Vacant buildings. (1) **GENERAL.** Except as provided in sub. (2), the owner of vacant or unoccupied buildings, or portions of the buildings, shall maintain all required sprinkler and standpipe systems and all component parts in a workable condition at all times. Fire alarm systems shall be maintained in operating condition at all times.

(2) **EXCEPTION.** (a) If the building is vacated for periods of time of more than one week, the fire alarm systems may be rendered inoperable. Before the building is occupied, the fire alarm system shall be restored and tested in the presence of the fire chief.

(b) In vacant or unoccupied buildings, where the fire chief determines the type of construction, fire separation and security of the building is not a fire hazard, the fire chief may permit the fire protection systems to be taken out of service in a manner and for a time as the chief specifically prescribes.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.46 Buildings under demolition. Prior to a building being demolished, an acceptable fire-safety plan designed to meet fire prevention needs may be required by the fire chief.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter VII — Means of Egress

ILHR 14.47 General requirements. All means of egress in public buildings and places of employment shall be provided and maintained as specified in chs. ILHR 50 to 64.

Note: See Appendix for reprint of ss. ILHR 51.15 to 51.20 and related sections from the occupancy chapters.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter VIII — Flammable and Combustible Liquids

Note: See NFPA No. 39 and related standards as adopted by reference in ch. ILHR 10 - Flammable and Combustible Liquids Code and the text of ch. ILHR 10.

Subchapter IX — Oil-Burning Equipment

Note: See ch. ILHR 10 - Flammable and Combustible Liquids Code.

Subchapter X — Organic Coatings

Note: See NFPA No. 35 as adopted by reference in ch. ILHR 10 - Flammable and Combustible Liquids Code.

Subchapter XI — Hazardous Materials and Chemicals

Note: See NFPA No. 45 as adopted by reference in ch. ILHR 10 - Flammable and Combustible Liquids Code.

Subchapter XII — Application of Flammable Finishes

Note 1: See NFPA Nos. 33 and 34 as adopted by reference in ch. ILHR 10 - Flammable and Combustible Liquids Code.

Note 2: See s. 1910.147 for the federal Occupational Safety and Health Administration standards for requirements dealing with spray booths.

Register, March, 1992, No. 435

Subchapter XIII — Service Stations and Garages

Note: See NFPA No. 30A as adopted by reference in ch. ILHR 10 - Flammable and Combustible Liquids Code and the text of ch. ILHR 10.

Subchapter XIV — Liquefied Petroleum Gases

Note: See NFPA Nos. 54, 58, 59 and 501C as adopted by reference in ch. ILHR 11 - Liquefied Petroleum Gases and the text of ch. ILHR 11.

Subchapter XV — Liquefied Natural Gas

Note: See NFPA No. 59A as adopted by reference in ch. ILHR 12 - Liquefied Natural Gas and the text of ch. ILHR 12.

Subchapter XVI — Compressed Natural Gas

Note: See NFPA No. 52 as adopted by reference in ch. ILHR 13 - Compressed Natural Gas and the text of ch. ILHR 13.

Subchapter XVII — Public Buildings and Places of Employment

ILHR 14.48 General requirements. All public buildings and places of employment shall be designed, constructed, operated and maintained as specified in chs. ILHR 50 to 64 and as specified in this chapter.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter XVIII — Bowling Establishments

ILHR 14.49 Prior notification. The fire chief shall be notified when bowling lanes are to be resurfaced.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.50 Prohibitions during lane resurfacing operations. (1) BUSINESS HOURS. Resurfacing of bowling lanes may not be carried on while the establishment is open for business.

(2) RECIRCULATION OF AIR. Heating, ventilating or cooling systems employing recirculation of air may not be operated during resurfacing of bowling lanes or within one hour following the application of flammable finishes to the lanes.

(3) SOURCES OF IGNITION. All electric motors or other equipment in the area of the bowling lanes which might be a source of ignition shall be shut down, and all smoking and use of open flames shall be prohibited during the application of flammable finishes to the lanes and for one hour thereafter.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter XIX — Tents and Air Supported Structures

ILHR 14.51 General requirements. (1) TENTS. Tents shall comply with the provisions of this subchapter and of ch. ILHR 62, subch. III.

Note: See Appendix for reprint of ch. ILHR 62, subch. III.

(2) AIR-SUPPORTED STRUCTURES. Air-supported structures shall comply with the provisions of chs. ILHR 50 to 64.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14

ILHR 14.52 Parking of vehicles. Automotive equipment that is used in connection with any tent may not be parked within 20 feet of the tent except by special permission of the fire chief. No other automotive equipment or internal combustion engines may be parked or located within 50 feet of the tent except upon a public street.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.53 Flame retardant treatment (1) GENERAL. (a) The side wall, drops and top of all tents shall be of flame-retardant material or shall be made fire retardant in a manner approved by the department.

(b) All bunting and other flammable decorations or effects shall be treated with a flame-retardant solution. Sawdust and wood chips may be used on floors and passageways if kept damp.

(2) **AFFIDAVIT.** An affidavit or affirmation shall be retained at the premises on which the tent is located, attesting to the following information relative to the flame-retardant treatment of the fabrics:

- (a) The date the fabric was last treated with flame-retardant solution;
- (b) The trade name or kind of chemical used in treatment;
- (c) The name of person or firm treating the material; and
- (d) The name and address of the owner of the tent.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.54 Smoking and open flame. (1) SMOKING. Smoking shall be prohibited in any tent or in any adjacent areas where hay, straw, alfalfa, sawdust or other highly combustible materials are kept or stored. Approved "No Smoking" signs shall be conspicuously posted.

(2) **OPEN FLAME.** No fireworks, open flame or other device emitting flame or fire may be used in or immediately adjacent to any tent while open to the public, except upon special permission from the fire chief.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.55 Fire extinguishers and other fire protection equipment. (1) FIRE EXTINGUISHERS. Fire extinguishers and other fire protection equipment shall be provided in every tent as follows:

(a) One 2-A type extinguisher shall be provided in every tent having a floor area of more than 500 square feet but less than 1000 square feet and also one in each adjacent tent. One additional 2-A type extinguisher shall be provided for each additional 2000 square feet or fraction thereof.

(b) At least one 10-B:C type fire extinguisher shall be provided for each eating area, power generator or transformer and at locations where flammable or combustible liquids are used, stored or dispensed.

(c) At least one 40-B:C type fire extinguisher shall be provided for each kitchen.

(2) **OTHER EQUIPMENT.** Fire hose lines, water supplies and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as may be required by the fire chief.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Register, March, 1992, No. 435

ILHR 14.56 Abatement of special fire or panic hazards. Any unforeseen condition that presents a fire hazard or would contribute to the rapid spread of fire, or would delay or interfere with the rapid exit of persons from the tent, or would interfere with or delay the extinguishment of a fire and which is not otherwise covered by this subchapter shall be immediately abated, eliminated or corrected as ordered by the fire chief.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.57 Flammable and combustible liquids (1) GENERAL. Flammable or combustible liquids may not be stored in a tent nor less than 50 feet from any tent used for public assemblage.

(2) **STORAGE AND DISPENSING.** The storage and dispensing of flammable or combustible liquids shall be in accordance with ch. ILHR 10.

(3) **LIQUEFIED PETROLEUM GASES.** Liquefied petroleum gas may not be stored or used in connection with any tent unless the storage containers, equipment, fittings and appliances, and the placement, use and operation of the equipment comply with ch. ILHR 11.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.58 Housekeeping. (1) WEEDS AND VEGETATION. All weeds and flammable vegetation shall be removed from the premises adjacent to or within 35 feet of any tent.

(2) **COMBUSTIBLE MATERIAL.** Hay, straw, trash and other flammable material may not be stored less than 35 feet from any tent, except upon special permission from the fire chief.

(3) **COMBUSTIBLE WASTE.** The grounds both inside and outside of tents shall be kept free and clear of combustible waste. The waste shall be stored in approved containers or removed from the premises.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter XX — Dry Cleaning Plants

Note: See ch. ILHR 15 - Cleaning and Dyeing.

Subchapter XXI — Lumber Yards

ILHR 14.59 Open yard storage and driveways. Open yard storage and driveways in lumberyards shall comply with s. ILHR 14.21 (3).

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.60 Operational fire hazards. (1) BURNING OF REFUSE MATERIALS. Where approved by the department of natural resources and the fire chief, the burning of shavings, sawdust and refuse materials shall be only in boilers, furnaces, incinerators or refuse burners, safely constructed and located.

(2) **SPARK PROTECTION.** Stacks shall be provided with approved spark arresters having openings not greater than $\frac{3}{4}$ -inch, or other effective means provided, such as an expansion chamber, baffle walls or other effective arrangement, which will eliminate the danger from sparks.

Register, March, 1992, No. 435

ILHR 14

(3) **STORAGE FACILITY.** At the boiler or other points where sawdust or shavings are used as fuel, a storage bin of noncombustible construction with raised sill shall be provided.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.61 Smoking prohibited. Smoking shall be prohibited except in specified safe locations in buildings. "No Smoking" signs shall be posted on exterior building walls and at the edges of driveways. "No Smoking" signs shall be posted throughout all buildings except in specific locations designated as safe for smoking purposes.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.62 Yards. Weeds shall be kept down throughout the entire yard and shall be sprayed, cut or dug out. Dead weeds shall be removed.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.63 Removal of debris. Debris, such as sawdust, chips and scrap pieces shall be removed regularly from piling areas and not less frequently than quarterly. Proper housekeeping shall be maintained at all times.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.64 Fire extinguishing equipment. All fork lifts and industrial trucks operating in lumberyards shall be equipped with a minimum 4-A:40-B:C type fire extinguisher. All other trucks operating in the yard shall be equipped with a minimum 2-A:20-B:C type fire extinguisher.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter XXII — Woodworking Plants

ILHR 14.65 Scope. This subchapter shall apply to woodworking plants or machines that are directly related to the main operation or product of the building or company.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.66 Refuse removal. (1) **REMOVAL SYSTEM OR BINS.** Sawmills, planing mills and other woodworking plants shall either:

(a) Be equipped with refuse removal systems which will collect and remove sawdust and shavings as produced; or

(b) Have suitable metal or metal-lined bins, provided with normally closed covers or automatically closing covers, installed at or near such machines. Shavings and sawdust shall be swept up and deposited in the bins at sufficiently frequent intervals as to keep the premises clean.

(2) **BLOWERS AND EXHAUST SYSTEMS.** Blower and exhaust systems shall be installed in accordance with nationally recognized good practice.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.67 Fire protection. Fire fighting equipment, either portable fire extinguishers or minimum ½ inch diameter hose supplied from a water system, shall be provided near any machine producing shavings or sawdust.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Register, March, 1992, No. 435

Subchapter XXIII — Fireworks

Note: See ch. ILHR 9 - Manufacture of Fireworks.

Subchapter XXIV — Explosives, Ammunition and Blasting

Note: See ch. ILHR 7 - Explosive Materials.

Subchapter XXV — Combustible Fibers

ILHR 14.68 Scope. The equipment, processes and operations for handling, storage or use of combustible vegetable or animal fibers, including but not limited to readily ignitable and free burning fibers such as cotton, sisal, henequen, ixtle, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers and cloth in the form of scraps and clippings, shall comply with the provisions of this subchapter.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.69 Storage (1) LOOSE STORAGE. (a) Except as provided in pars. (b) to (f), loose combustible fibers not in bales or packages, whether housed or in the open, may not be stored within 100 feet of any building.

(b) Up to 100 cubic feet of loose combustible fibers may be kept in any building, provided storage is in a metal or metal-lined bin equipped with a self-closing cover.

(c) Quantities exceeding 100 cubic feet of loose combustible fibers, but not exceeding 500 cubic feet, may be stored in rooms or compartments having floor, walls and ceiling with a fire-resistance rating of not less than one hour. Each opening into the rooms or compartments from other parts of the building shall be protected by an approved ¾-hour rated fire door assembly.

(d) Quantities exceeding 500 cubic feet of loose combustible fibers may be stored in an approved 2-hour rated fire-resistive enclosure.

(e) Pars. (b) to (d) shall not apply to buildings completely protected by an approved automatic fire suppression system.

(f) A maximum of 2,500 cubic feet of loose combustible fibers may be stored in a detached storage building located with openings properly protected against entrance of sparks. The storage building may not be used for any other purpose.

(2) BALED STORAGE. (a) A single block or pile may not contain more than 25,000 cubic feet of fiber exclusive of aisles or clearances.

(b) Blocks or piles of baled fiber shall be separated from adjacent storage by aisles not less than 5 feet wide, or by flash fire barriers consisting of continuous sheets of noncombustible material extending from the floor to a height of at least one foot above the highest point of piles and projecting at least one foot beyond the sides of the piles.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.70 Special baling conditions. (1) **GENERAL.** Sisal and other fibers in bales bound with combustible tie ropes, and jute and other fibers liable to swell when wet, shall be stored to allow for expansion in any direction without endangering building walls, ceilings or columns.

(2) **MINIMUM DISTANCE.** (a) Except as provided in par. (b), a minimum 3-foot clearance shall be left between walls and sides of piles.

(b) A one-foot clearance at side walls shall be sufficient if the storage compartment is not more than 30 feet in width and if a center aisle not less than 5 feet wide is maintained.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

Subchapter XXVI — Dust Explosion Hazards

ILHR 14.71 General requirements. (1) **APPLICATION.** Equipment and processes in plants where dust hazards exist shall comply with the requirements of this subchapter. Where specific requirements are not otherwise established, plants producing dusts shall comply with nationally recognized good practice.

(2) **MACHINE ENCLOSURES.** All dust-producing or dust-agitating machinery such as grinding mills and separators, and all elevators, elevator legs, spouts, hoppers and other conveyors shall be provided with casing or enclosures maintained as dust-tight as possible.

(3) **SEPARATORS.** Approved magnetic or pneumatic separators shall be installed ahead of all shellers, crackers, crushers, grinding machines, pulverizers and similar machines in which the entrance of foreign materials may cause sparks to be generated.

(4) **DUST COLLECTORS.** Dust collecting equipment shall be installed on all dust-producing machinery, and accumulation of dust shall be kept at a minimum in the interior of buildings.

(5) **GROUNDING.** All machinery and metal parts of the crushing, drying, pulverizing and conveying systems shall be electrically grounded.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

ILHR 14.72 Fire safety requirements. (1) **SOURCES OF IGNITION.** Smoking and the carrying of matches, the use of heating or other devices employing an open fire, or use of any spark producing equipment shall be prohibited in areas containing dust-producing or dust-agitating operations.

(2) **LIGHTING AND ELECTRICAL EQUIPMENT.** Artificial lighting in areas containing dust-producing or dust-agitating operations shall be by electricity. All wiring and electrical equipment shall be installed in accordance with the applicable provisions of ch. ILHR 16.

History: Cr. Register, March, 1992, No. 435, eff. 4-1-92.

CHAPTER ILHR 14
APPENDIX

The material contained in this appendix is for clarification purposes only. The notes, illustrations, etc. are numbered to correspond to the number of the rule as it appears in the text of this code.

A14.002 (2) (b) Exempt Buildings. The text of this section refers to s. 102.04 (3), Stats., as it relates to the definition of farming. The following is a reprint of s. 102.04 (3), Stats.:

102.04 (3) As used in this chapter "farming" means the operation of farm premises owned or rented by the operator. "Farm premises" means areas used for operations herein set forth, but does not include other areas, greenhouses or other similar structures unless used principally for the production of food and farm plants. "Farmer" means any person engaged in farming as defined. Operation of farm premises shall be deemed to be the planting and cultivating of the soil thereof; the raising and harvesting of agricultural, horticultural or arboricultural crops thereon; the raising, breeding, tending, training and management of livestock, bees, poultry, fur-bearing animals, wildlife or aquatic life, or their products, thereon; the processing, drying, packing, packaging, freezing, grading, storing, delivering to storage, to market or to carrier for transportation to market, distributing directly to consumers or marketing any of the above-named commodities, substantially all of which have been planted or produced thereon; the clearing of such premises and the salvaging of timber and management and use of wood lots thereon, but not including logging, lumbering or wood cutting operations unless conducted as an accessory to other farming operations; the managing, conserving, improving and maintaining of such premises or the tools, equipment and improvements thereon and the exchange of labor, services or the exchange of use of equipment with other farmers in pursuing such activities. The operation for not to exceed 30 days during any calendar year, by any person deriving the person's principal income from farming, of farm machinery in performing farming services for other farmers for a consideration other than exchange of labor shall be deemed farming. Operation of such premises shall be deemed to include also any other activities commonly considered to be farming whether conducted on or off such premises by the farm operator.

A14.02 (2) (e) Fire Inspection Report Forms. The following are reproductions of the fire department inspection report forms (SBD-7959 and SBD-7958) and the fire department building record (SBD-2113). The forms are available at no cost from the Fire Prevention Section, Division of Safety and Buildings, P. O. Box 7969, Madison, Wisconsin 53707, telephone 608/266-0762.

FIRE DEPARTMENT INSPECTION REPORT

Owner:

Owner Address:

Telephone:

Agent:

Agent Address:

Telephone:

Occupant:

Occupant Address:

Telephone:

Type of Business:

Construction:

Height:

Roof Construction:

Fire Appliances:

Insurance Carrier:

Fire Department Conn:

Complaints:

Street

Number

Classification

Date of Inspection	Year _____			
	1st Insp	2nd Insp	3rd Insp	4th Insp
1. Aisles				
2. Alarm System				
3. Building Repairs				
4. Burning				
5. Chemicals				
6. Combustibles				
7. Doors				
8. Ducts/Vents				
9. Electricity				
10. Elevators				
11. Exit Lights				
12. Extinguishers				
13. Exits				
14. Explosives				
15. Fire Doors				
16. Fire Escapes				
17. Flameproofing				
18. Flammable Liquids				
19. Housekeeping				
20. Isolation/Enclosure				
21. Open Flame Devices				
22. Paint Spraying				
23. Rubbish/Wastes				
24. Smokepipes				
25. Sprinklers				
26. Stairs				
27. Standpipes/Cabinets				
28. Welding				
29. Other				
30. Inspector				
31. Dept. Violation No.				

ADDITIONAL INFORMATION:

FIRE DEPARTMENT INSPECTION REPORT: FILLING STATION - BULK PLANT

Owner:		I. F. L.	O. F. L.
Owner Address:		Telephone:	
Agent:			
Agent Address:		Telephone:	
Occupant:			
Occupant Address:		Telephone:	
Type of Business:			
Construction:	Height:	Roof:	
Fire Appliances:			
Insurance Carrier:			
Fire Dept. Conn: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, where located:			
Foam on Hand:			
Liquid (gals): _____		Powder (cans) _____	
Number of flammable liquid tanks on property, contents and capacity of each:			

Number of underground tanks:		Above Ground:	
		Horizontal: _____	Vertical: _____
Are tanks being used:		If not used, Are tanks properly abandoned	
<input type="checkbox"/> Yes <input type="checkbox"/> No		in place: <input type="checkbox"/> Yes <input type="checkbox"/> No	

Street

Number:

Classification:

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Date of Inspection				
1. Vertical Tanks				
2. Horizontal Tanks				
3. Underground Tanks				
4. Vents				
5. Barrel Storage				
6. Dikes				
7. Pumphouse				
8. Warehouse				
9. Truck Loading				
10. Building and Grounds				
11. Required Tanks Labels				
12. Fire Appliances				
13. Heating Units				
14. Tank Car Unloading				
15. Storage - Flam. Liquids				
16. Pumps on Flam. Liquids				
17. Electrical				
18. "No Smoking" Signs				
19. Gas Pumps				
20. Other Violations				
21. Complaints:				
22. Complaints Carried Over:				

A14.02 (2) (e) Written fire reports. The following are reproductions of the NFIRS fire report forms which fire departments are encouraged to use in filing reports with the department. The forms are available at no cost from the Fire Prevention Section, Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707, telephone 608/267-5264.

INDUSTRY, LABOR, and HUMAN RELATIONS

WISCONSIN FIRE INCIDENT REPORTING SYSTEM **ENTER NAME OF FIRE DEPT.**

A	10	FID#	INCIDENT NO.	EXP.	MO.	DAY	YEAR	DAY OF WEEK 1 Sunday 2 Monday 3 Tuesday 4 Wednesday 5 Thursday 6 Friday 7 Saturday	ALARM TIME	ARRIVAL TIME	BACK SERVICE												
		PARTIAL MENU - SEE HANDBOOK																					
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COMPLETE FORM FOR ALL TYPES OF FIRES

SBD 5301 (R. 12/88)

MEMBER MARKING REPORT DATE

WISCONSIN FIRE INCIDENT REPORTING SYSTEM

Fire Department

WISCONSIN CIVILIAN CASUALTY REPORT

DISCLAIMER: No representation is made, intended, or implied as to the validity or accuracy of information shown.

Header row with fields: A 50, FDID, Incident No., Exp. No., Mo., Day, Year, Day of Week, Alarm Time

Main form section for the first casualty, including fields for GA (Casualty Number), GB (Home Address), GC (Sex), GD (Familiarity with Structure), GE (Condition Preventing Escape), GF (Nature of Injury), and various injury/condition checkboxes.

Main form section for the second casualty, including fields for GA (Casualty Number), GB (Home Address), GC (Sex), GD (Familiarity with Structure), GE (Condition Preventing Escape), GF (Nature of Injury), and various injury/condition checkboxes.

Footer row with fields: U OFFICER IN CHARGE AT INCIDENT (Name, Position), Date, MEMBER MAKING REPORT, Date

SBD - 5302 (R. 12/90) NFIRS - 2

STATE (OILHR)

INDUSTRY, LABOR, and HUMAN RELATIONS

37

ILHR 14

WISCONSIN FIRE INCIDENT REPORTING SYSTEM

Fire Department

WISCONSIN FIRE SERVICE CASUALTY REPORT

FD#	Incident No.	Exposure No.	Casualty No.	Injury Occurred	Mo.	Day	Year	Time of Injury	
FA	Incident Name (Last, First, MI)			Casualty Type					
FB	Age			Case Severity					Primary Apparent Symptom - See Reverse Side for Codes
FC	Primary Body Part - See reverse side for codes			Patient Taken To:					
FD	Assignment			Where Injury Occurred					
FE	Fire Fighting Activity (See note at bottom)			Where Injury Occurred (See note at bottom)					
FF	Cause of Fire/Fighter Injury (See note at bottom)			Medical Care Provided					
FG	Protective Coat Worn			Status of Protective Coat					Problem With Protective Coat
FH	Protective Trousers Worn			Status of Protective Trousers					Problem With Protective Trousers
FI	Boots/Shoes Worn			Status of Boots					Problem With Boots/Shoes
FJ	Helmet Worn			Status of Helmet					Problem With Helmet
FK	Face Protection Worn			Status of Face Protection					Problem With Face Protection
FL	Breathing Apparatus Worn			Status of Breathing Apparatus					Problem With Breathing Apparatus
FM	Goggles Worn			Problem With Goggles					
FN	Special Equipment Worn			Status of Special Equipment					Problem With Special Equipment
FO	Member Name (Last, First, MI)			Date Signed					
FP	Officer in Charge at Incident (Last, First, MI)			Date Signed					

* Codes listed are the general codes. NFIRS (Long Form) participants who wish to use more detailed codes should refer to the NFIRS handbook for additional valid codes.

NOTE TO NFIRS (LONG FORM PARTICIPANTS): If you wish to use other codes for PRIMARY APPARENT SYMPTOM and/or PRIMARY BODY PART, refer to the NFIRS Handbook for additional valid codes.

**Alphabetical Listing of Most Common
PRIMARY APPARENT SYMPTOM**

- | | | |
|--|--|--|
| 01. Abrasion | 17. Dehydration | 40. Pain only |
| 02. Amputation | 20. Difficulty breathing,
shortness of breath | 41. Paralysis |
| 03. Asphyxiation - included is
smoke inhalation | 21. Dislocation | 44. Puncture/wound penetrating |
| 04. Avulsion (of eye) | 22. Disorientation | 45. Poison not listed elsewhere |
| 31. Bleeding hemorrhaging | 23. Dizziness/fainting/weakness | 47. Respiratory arrest |
| 05. Burn - chemical | 24. Drowning | 03. Smoke inhalation, asphyxia |
| 06. Burn - electric | 49. Electric shock | 51. Sprain, strain |
| 07. Burn - thermal | 04. Eye (avulsion of) trauma,
out of socket | 52. Stroke (CVA) |
| 08. Burn - scald | 27. Foreign body, obstruction | 53. Swelling |
| 10. Cardiac arrest | 28. Fracture, closed | 54. Unconscious |
| 11. Cardiac symptoms | 29. Fracture, open | 55. Vomiting |
| 12. Chills | 30. Frostbite | 98. No apparent symptom |
| 13. Contusion/bruise - minor
trauma | 34. Internal trauma (closed blunt) | 99. Apparent symptom not listed
above |
| 16. Crushing | 37. Nausea | 00. Apparent symptom
undetermined or not reported |
| 35. Cut, lacerations | 42. Numbness, tingling | |

**General Codes For
PRIMARY BODY PART**

- | | | |
|--|---|--|
| 10. Head area, insufficient
information to classify further | 50. Internal, insufficient
information to classify further | 78. Multiple body parts - whole body |
| 20. Trunk, insufficient
information to classify further | 61. Spine | 98. Part of body not applicable |
| 30. Arm/hand, insufficient
information to classify further | 62. Pelvis | 99. Part of body not classified
above |
| 40. Leg/foot, insufficient
information to classify further | 63. Hip | 00. Part of body undetermined or
not reported |
| | 76. Multiple body parts - upper | |
| | 77. Multiple body parts - lower | |

**Complete Listing of
PROBLEMS WITH BREATHING APPARATUS**

FACE PIECE/HOSE

11. Burned
12. Ripped
13. Melted
14. View plate cracked/broken
15. Detached
16. Exhalation valve inoperative/
damaged
19. Problem with face piece/hose
not classified above
10. Problem with face piece/hose:
insufficient information to
classify further

HARNESSES

21. Burned
22. Ripped
23. Melted
24. Detached/separated
29. Problem with harness
not classified above
20. Problem with harness:
insufficient information
to classify further

REGULATOR

31. Failed
32. Damaged by contact
33. Problem with admissions valve
39. Problem with regulator
not classified above
30. Problem with regulator:
insufficient information
to classify further

ALARM

41. Failed to operate
42. Damaged by contact
49. Problem with alarm
not classified above
40. Problem with alarm: insufficient
information to classify further

SUPPLY CYLINDER/VALVE

51. Failed to operate
52. Damaged by contact
53. Contained insufficient air/oxygen
59. Problem with supply cylinder/valve
not classified above
50. Problem with supply cylinder/valve:
insufficient information to classify further

**OTHER BREATHING APPARATUS
PROBLEMS**

97. No failure of breathing
apparatus
98. No breathing apparatus
being used
99. Problems with breathing
apparatus not classified above
00. Problems with breathing
apparatus undetermined or
not reported

**WISCONSIN FIRE INCIDENT
REPORTING SYSTEM
SHORT FORM**

ENTER FIRE

DEPT. NAME

1	FDID	Incident No.	Exp.	Mo.	Day	Year	Alarm Time	Owner Name	
2	Owner Street Address (Up to a maximum of 30 characters):					Municipality, Town, Village:		Zip Code:	
3	Situation Found: 11 <input type="checkbox"/> Structure Fire 13 <input type="checkbox"/> Vehicle Fire 14 <input type="checkbox"/> Brush, Grass, Leaves 15 <input type="checkbox"/> Trash, Rubbish			16 <input type="checkbox"/> Explosion, No After Fire 17 <input type="checkbox"/> Outside Spill With Fire 19 <input type="checkbox"/> Other Fires Not Classified		4 Action Taken: 1 <input type="checkbox"/> Extinguished 3 <input type="checkbox"/> Investigation Only 4 <input type="checkbox"/> Remove Hazard 9 <input type="checkbox"/> Not Classified		5 Mutual Aid: 1 <input type="checkbox"/> Received 2 <input type="checkbox"/> Given 3 <input type="checkbox"/> Not Applicable	
6	Fixed Property Use (Occupancy): 1 <input type="checkbox"/> Public Assembly Property 2 <input type="checkbox"/> Educational Property 3 <input type="checkbox"/> Institutional Property 4 <input type="checkbox"/> Residential Property 5 <input type="checkbox"/> Store, Office Property 6 <input type="checkbox"/> Basic Industry, Utility, Defense Property 7 <input type="checkbox"/> Manufacturing Property 8 <input type="checkbox"/> Storage Property			9 <input type="checkbox"/> Special Property 0 <input type="checkbox"/> Unknown		7 Ignition Factor: 1 <input type="checkbox"/> Incendiary, Suspicious 2 <input type="checkbox"/> Misuse of Heat or Ignited Material 3 <input type="checkbox"/> Smoking 4 <input type="checkbox"/> Heating 5 <input type="checkbox"/> Cooking 6 <input type="checkbox"/> Electrical Distribution 7 <input type="checkbox"/> Appliances, Air-Cond.		8 <input type="checkbox"/> Open Flame, Torch 9 <input type="checkbox"/> Other Heat 10 <input type="checkbox"/> Other Equipment 11 <input type="checkbox"/> Natural 12 <input type="checkbox"/> Exposure 13 <input type="checkbox"/> Unknown	
		Is fire attributable to children? 8 <input type="checkbox"/> Yes <input type="checkbox"/> No							
9	Number of Injuries: Fire Service →		Number of Injuries: Civilian →		Number of Fatalities: Fire Service →		Number of Fatalities: Civilian →		
10	Estimated Total Dollar Loss DO NOT SHOW CENTS:			11 Smoke Detector Performance: Installed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Did they activate? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		12 Signature of Member Making Report:		Date Signed:	
			<input type="checkbox"/> Fire Department does not report dollar loss						

SBD-8568 (N. 04/90)

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INDUSTRY, LABOR, and HUMAN RELATIONS
ILHR 14

39

A14.08 Petition for variance. The following forms (SB-8 and SB-8A) are referred to in this section. Copies of these forms are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

PETITION FOR VARIANCE APPLICATION

Wisconsin Department of Industry, Labor and Human Relations
Safety and Buildings Division
201 East Washington Avenue, P.O. Box 7969
Madison, Wisconsin 53707
608/266-3151

OFFICE USE ONLY
Amount Paid
Receipt No.

OFFICE USE ONLY
Petition No.
E-Number

Table with 3 columns: Name of Owner/Petitioner, Building or Project, Agent, Architect or Engineering Firm. Includes fields for Company, Street & Number, Location, City, State, Zip Code, Telephone Number, Plan Number, and Name of Contact Person.

- 1. The rule being petitioned reads as follows: (cite specific rule number and language)
2. The rule being petitioned cannot be entirely satisfied because:
3. The following alternative(s) and supporting information are proposed as a means of providing an equivalent degree of health, safety or welfare as addressed by the rule:

Note: Please attach any pictures, plans, sketches or required position statements.

VERIFICATION BY OWNER - PETITION IS VALID ONLY IF NOTARIZED AND ACCOMPANIED BY REVIEW FEE
See Section Ind 69.15 for complete fee information

Note: Petitioner must be the owner of the building or project. Tenants, agents, designers, contractors, attorneys, etc. may not sign petition unless a Power of Attorney is submitted with the Petition for Variance Application.

(NAME OF PETITIONER, Please type/print) being duly sworn, I state as petitioner that I have read the foregoing petition, that I believe it to be true and I have significant ownership rights in the subject building or project.

Signature of Petitioner Subscribed and sworn to before me this date:
Notary Public My commission expires:

SB-0(R.09/88)

WISCONSIN ADMINISTRATIVE CODE

POSITION STATEMENT:
To be compiled by
Chief of Fire Department

WISCONSIN DEPARTMENT OF
INDUSTRY, LABOR AND HUMAN RELATIONS
DIVISION OF SAFETY & BUILDINGS
P.O. BOX 7969 MADISON WI 53707

Name of Owner		Building Occupancy or Use		Agent, Architect or Engineering Firm	
Company		Tenant Name, if any		Street & No.	
Street & No.		Building Location, Street & No.		City	State & Zip
City	State & Zip	City	County	Phone	
1. I have read the petition for variance of rule:					
2. I recommend (Check appropriate box)		Denial	Approval	Conditional Approval	No Comment*
3. Explanation for Recommendation:					
<p>* If desired, Fire Departments may indicate "No Comment" on non-fire safety issues such as sanitary, energy conservation, structural, barrier free environments, etc.</p>					
4. <input type="checkbox"/> I find no conflict with local rules and regulations <input type="checkbox"/> I find that the petition is in conflict with local rules and regulations					
Explanation					
Signature of Fire Chief				Date	

PLEASE COMPLETE AND SUBMIT PROMPTLY TO DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS AT THE ADDRESS SHOWN ABOVE.

SB-8A (R. 12/84)

A14.14 Kindling of fire. The following is a reprint of ss. 941.11, 943.02 and 943.03, Stats.:

941.11 Unsafe burning of buildings. *Whoever does either of the following is guilty of a Class D felony:*

(1) *Intentionally burns his own building under circumstances in which he should realize he is creating an unreasonable risk of death or great bodily harm to another or serious damage to another's property; or*

(2) *Intentionally burns a building of one who has consented to the destruction thereof but does so under circumstances in which he should realize he is creating an unreasonable risk of death or great bodily harm to another or serious damage to a third person's property.*

943.02 Arson of buildings; damage of property by explosives. (1) *Whoever does any of the following is guilty of a Class B felony:*

(a) *By means of fire, intentionally damages any building of another without his consent; or*

(b) *By means of fire, intentionally damages any building with intent to defraud an insurer of that building; or*

(c) *By means of explosives, intentionally damages any property of another without his consent.*

(2) *In this section "building of another" means a building in which a person other than the actor has a legal or equitable interest which the actor has no right to defeat or impair, even though the actor may also have a legal or equitable interest in the building. Proof that the actor recovered or attempted to recover on a policy of insurance by reason of the fire is relevant but not essential to establish his intent to defraud the insurer.*

943.03 Arson of property other than building. *Whoever, by means of fire, intentionally damages any property (other than a building) of another without the person's consent, if the property is of the value of \$100 or more, is guilty of a Class E felony.*

A14.15 Handling of burning material. The following is a reprint of ss. 941.10 and 943.05, Stats.:

941.10 Negligent handling of burning material. (1) *Whoever handles burning material in a highly negligent manner is guilty of a Class A misdemeanor.*

(2) *Burning material is handled in a highly negligent manner if handled with criminal negligence under s. 939.25 or under circumstances in which the person should realize that a substantial and unreasonable risk of serious damage to another's property is created.*

943.05 Placing of combustible materials an attempt. *Whoever places any combustible or explosive material or device in or near any property with intent to set fire to or blow up such property is guilty of an attempt to violate either s. 943.01, 943.012, 943.02, 943.03 or 943.04, depending on the facts of the particular case.*

A14.18 Miscellaneous use of torches and welding equipment. The following is a reprint of section 1926.352 of the OSHA regulations:

1926.352 Fire prevention.

(a) When practical, objects to be welded, cut, or heated shall be moved to a designated safe location or, if the objects to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place, or otherwise protected.

(b) If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means shall be taken to confine the heat, sparks, and slag, and to protect the immovable fire hazards from them.

(c) No welding, cutting, or heating shall be done where the application of flammable paints, or the presence of other flammable compounds, or heavy dust concentrations creates a hazard.

(d) Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for instant use.

(e) When the welding, cutting, or heating operation is such that normal fire prevention precautions are not sufficient, additional personnel shall be assigned to guard against fire while the actual welding, cutting, or heating operation is being performed, and for a sufficient period of time after completion of the work to ensure that no possibility of fire exists. Such personnel shall be instructed as to the specific anticipated fire hazards and how the firefighting equipment provided is to be used.

(f) When welding, cutting, or heating is performed on walls, floors, and ceilings, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions shall be taken on the opposite side as are taken on the side on which the welding is being performed.

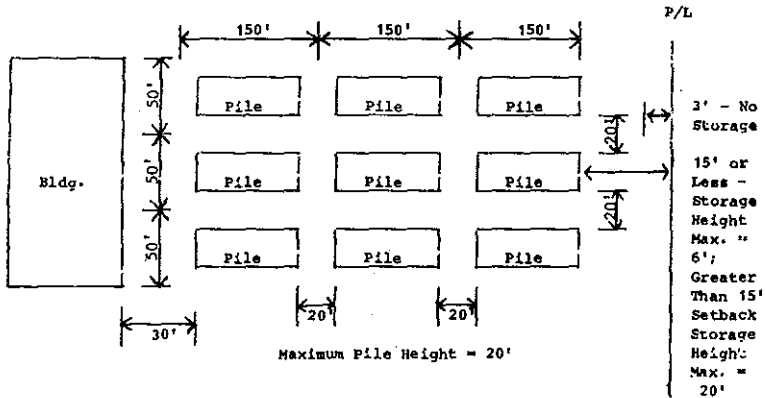
(g) For the elimination of possible fire in enclosed spaces as a result of gas escaping through leaking or improperly closed torch valves, the gas supply to the torch shall be positively shut off at some point outside the enclosed space whenever the torch is not to be used or whenever the torch is left unattended for a substantial period of time, such as during the lunch period. Overnight and at the change of shifts, the torch and hose shall be removed from the confined space. Open end fuel gas and oxygen hoses shall be immediately removed from enclosed spaces when they are disconnected from the torch or other gas-consuming device.

(h) Except when the contents are being removed or transferred, drums, pails, and other containers which contain or have contained flammable liquids shall be kept closed. Empty containers shall be removed to a safe area apart from hot work operations or open flames.

(i) Drums, containers, or hollow structures which have contained toxic or flammable substances shall, before welding, cutting, or heating is undertaken on them, either be filled with water or thoroughly cleaned of such substances and ventilated and tested. For welding, cutting, and heating on steel pipelines containing natural gas, the pertinent portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, Minimum Federal Safety Standards for Gas Pipelines, shall apply.

(j) Before heat is applied to a drum, container, or hollow structure, a vent or opening shall be provided for the release of any built-up pressure during the application of heat.

A14.21 (3) (c) Outside storage. The following diagram illustrates a typical sample layout of piles and driveways that satisfies the requirement.



A14.25 Matches. The following is a reprint of s. 167.07, Stats.:

167.07 Manufacture, storage and distribution of matches. (1) No person, association or corporation shall manufacture, store, offer for sale, sell, or otherwise dispose of or distribute white phosphorous, single-dipped, strike-anywhere matches of the type popularly known as 'parlor matches,' nor manufacture, store, sell, offer for sale, or otherwise dispose of or distribute white phosphorous, double-dipped strike-anywhere matches, or other type of double-dipped matches, unless the bulb or first dip of such match is composed of a so-called safety or inert composition, nonignitable on an abrasive surface; nor manufacture, store, sell, offer for sale, or otherwise dispose of or distribute matches which, when packed in a carton of five hundred approximate capacity and placed in an oven maintained at a constant temperature of two hundred degrees F., will ignite in eight hours; nor manufacture, store, offer for sale, sell or otherwise dispose of or distribute Blazer, or so-called wind matches, whether of the so-called safety or strike-anywhere type.

(2) No person, association or corporation shall offer for sale, sell or otherwise dispose of or distribute any matches, unless the package or container in which such matches are packed bears plainly marked on the outside thereof the name of the manufacturer and the brand or trademark under which such matches are sold, disposed of or distributed; nor shall more than one case of each brand of matches of any type or manufacture be opened at any one time in the retail store where matches are sold or otherwise disposed of; nor shall loose boxes or paper-wrapped packages of matches be kept on shelves or stored in such retail stores at a height exceeding five feet from the floor; all matches, when stored in warehouses, excepting manufacturers' warehouses at a place of manufacture, when such warehouses contain automatic sprinkler equipment, must be kept only in properly secured cases, and not piled to a height exceeding ten feet from the floor; nor be stored within a horizontal distance of

ten feet from any boiler, furnace, stove or other like heating apparatus, nor within a horizontal distance of twenty-five feet from any explosive material kept or stored on the same floor; all matches shall be packed in boxes or suitable packages, containing not more than seven hundred matches in any one box or package; provided, however, that when more than three hundred matches are packed in any one box or package, the said matches shall be arranged in two nearly equal portions, the heads of the matches in the two portions shall be placed in opposite directions, and all boxes containing three hundred and fifty or more matches shall have placed over the matches a center holding or protecting strip, made of chipboard, not less than one and one-quarter inches wide; said strip shall be flanged down to hold the matches in position when the box is nested into the shuck or withdrawn from it.

(3) All match boxes or packages shall be packed in strong shipping containers or cases; maximum number of match boxes or packages contained in any one shipping container or case, shall not exceed the following number:

Number of Boxes	Nominal Number of Matches per Box
One-half gross	700
One gross	500
Two gross	400
Three gross	300
Five gross	200
Twelve gross	100
Twenty gross	over fifty and under 100
Twenty-five gross	under 50

(4) No shipping container or case constructed of fiber board, corrugated fiber board, or wood, nailed or wirebound, shall exceed a weight, including its contents, of 75 pounds; and no lock-cornered wooden case containing matches shall have a weight, including its contents, exceeding 85 pounds; nor shall any other article or commodity be packed with matches in any such container or case; and all such containers and cases in which matches are packed shall have plainly marked on the outside of the container or case the words 'Strike-Anywhere Matches' or 'Strike-on-the-Box Matches.'

(5) Any person, association or corporation violating this section shall be fined for the first offense not less than \$5 nor more than \$25, and for each subsequent violation not less than \$25.

A14.31 Chimneys and heating appliances. The following is a reprint of ss. ILHR 64.45 to 64.50:

ILHR 64.45 Chimneys, smoke stacks, gas vents, mechanical draft and venting devices. (1) **GENERAL REQUIREMENTS.** Heating equipment using solid, liquid or gas fuels shall be vented to the outside, except as permitted in s. ILHR 64.21. A natural draft chimney or other venting device shall have the height and area to remove the products of combustion. Chimneys, smoke stacks, gas vents, mechanical draft and venting devices shall comply with the requirements of NFPA No. 211.

(2) **NONCOMBUSTIBLE SUPPORTS.** All chimneys or gas vents shall be supported from noncombustible construction unless otherwise approved.

(3) **TERMINATION.** (a) *Gravity type.* 1. All chimneys or smokestacks depending on a gravity principle for the removal of the products of combustion shall extend at least 3 feet above the highest point where the chim-

neys or smokestacks pass through the roof of the building, and at least 2 feet higher than any ridge, peak or wall within 10 feet of the chimney or smokestack.

2. Type "B", "BW" and "L" vents and single wall vent pipes depending on a gravity principle for the removal of the products of combustion shall extend at least 2 feet above the highest point where the vents or pipes pass through the roof of the building, and at least 2 feet higher than any ridge, peak or wall within 10 feet of the vent or pipe.

(b) *Mechanical type.* The height and cross-sectional area may be reduced for chimneys employing a mechanical draft system of either forced or induced draft when approved by the department.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76; am. (1) and (3) (a), Register, January, 1980, No. 289, eff. 2-1-80; am. (1), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 64.46 Masonry chimneys. The design and construction of the chimney shall conform to the provisions of this section.

(1) **MATERIALS.** The walls shall be built of brick or other approved fire-resistant material. No chimney shall rest upon a flooring of wood nor shall any wood be built into or in contact with any chimney. Combustible headers, beams, joists and studs shall be located at least 2 inches from the outside face of a chimney. The foundation shall be designed and built in conformity with the requirements for foundations for buildings. In no case shall a chimney be corbeled out more than 6 inches from the wall and in every case the corbeling shall consist of at least 5 courses of brick.

(2) **FLUE SIZE.** Every masonry chimney shall have walls at least 8 inches in solid thickness, except that in a chimney with a flue not larger than 260 square inches where a fire clay or other suitable refractory clay flue lining is used for the full height of the chimney the walls shall not be less than 4 inches in solid thickness. No smoke flue shall have a cross-sectional area less than 64 square inches. Flue linings 7 inches by 7 inches inside, or 8 inches in diameter inside, may be used.

(3) **FLUE LININGS.** All flue linings shall be capable of withstanding reasonably high temperatures and flue gases and shall have a softening point not lower than 1800° F. Flue linings shall be not less than ¾ inch in thickness and shall be built in as outer walls of the chimney are constructed. Flue linings shall start from a point not less than 8 inches below the bottom of the smoke pipe intake and shall be continuous to a point not less than 4 inches above the enclosing walls.

(4) **SMOKE PIPE CONNECTION.** If there is more than one smoke pipe connected to a flue, the connections shall be at different levels. Two or more heating units, or appliances, may be connected to a common smoke pipe, or breeching, if joined by Y fittings as close as practicable to the flue. In all such cases, the size of the breeching and the flue shall be sufficient to accommodate the total volume of flue gases.

(5) **CLEAN-OUT OPENING.** Every chimney shall be provided with a clean-out opening at the base. Such openings shall be equipped with metal doors and frames arranged to remain closed when not in use.

(6) **WIND PRESSURE.** Every chimney shall be designed to withstand wind pressures in accordance with the requirements of s. ILHR 53.12.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76; am. (1), Register, January, 1980, No. 289, eff. 2-1-80.

FP ILHR 64.47 Metal smokestacks. (1) **SMOKESTACKS IN EXCESS OF 30 FEET.** The thickness of the metal walls shall be at least 3/16 inch for smokestack heights up to 40 feet and ¼ inch for greater heights. Stacks used for manufacturing, high-pressure boilers, furnaces or other similar heating or manufacturing appliances shall be lined with firebrick, or equivalent, for a distance of not less than 25 feet from the place where the smoke pipe enters and shall be protected on the outside up to and through the roof of the building with 8 inches of masonry, or a metal shield which provides an 8-inch ventilated air space between such shield and the stack. All stacks shall be properly guyed if the height of the stack exceeds 15 times its least diameter.

(a) *Exception.* Public utility or industrial power plants are exempted from the protection requirements of this paragraph if they are of type 1 or 2 construction.

(2) **SMOKESTACKS LESS THAN 30 FEET.** Smokestacks less than 30 feet high may be constructed of not less than No. 10 U.S. gauge steel, with either welded or riveted joints, and may be mounted directly upon masonry chimneys or foundations or upon industrial heating or power boilers provided all of which are designed to support the stack load. A clearance of not less than 6 inches shall be maintained at all times around such smokestacks and any combustible material within 12 inches of such smokestacks shall be protected by noncombustible insulation covered by sheet metal.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76; am. (1) (intro.), Register, December, 1978, No. 276, eff. 1-1-79; am. (2), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 64.48 Factory-built chimneys and gas vents. (1) **GENERAL.** Factory-built chimneys and gas vents shall be of an approved type.

(2) **TYPES OF APPROVED CHIMNEYS AND GAS VENTS.** (a) *Residential type and building heating appliance.* An approved "residential type and building heating appliance" chimney or "building heating appliance" chimney may be used with solid-, liquid- or gas-fired heating appliances where the flue gas temperature does not exceed 1000° F. continuously, and does not exceed 1400° F. for infrequent brief periods of forced firing.

Note: Residential type and building heating appliance chimneys were formerly referred to as Class A chimneys.

(b) *Type "B".* An approved type "B" gas vent may be used with gas-fired appliances where the flue gas temperature does not exceed 550° F. at the outlet of the draft hood.

(c) *Type "BW".* An approved type "BW" gas vent may be used with a vented recessed wall heater.

(d) *Single wall vent pipe.* An approved single wall vent pipe may be used with gas-fired, low-heat appliances (low-pressure boilers, furnaces and space heaters). The vent shall be not less than No. 20 standard gauge galvanized iron, No. 24 Brown and Sharpe gauge sheet copper, or other approved corrosion-resistant material. The installation shall conform to the requirements of s. ILHR 64.50.

(e) *Type "L"*. An approved type "L" vent may be used with oil-fired appliances listed as suitable by a recognized agency and with gas-fired appliances approved for type "B" vents.

(f) *Equipment listed with venting system*. Venting systems included with the listing of the heating appliance may be used subject to the requirements and limitations of the listing.

Note: The department recognizes, as approved, chimneys designated as "residential type", "building heating appliance", "B", "BW" and "L" types listed by Underwriters' Laboratories, Inc.

History: Cr. Register, December, 1975, No. 240, eff. 1-1-76; r. and recr., Register, December, 1978, No. 276, eff. 1-1-79; am. (2) (a) and (d), Register, December, 1981, No. 312, eff. 1-1-82; cr. (2) (f), Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 64.49 Gas vents. All gas ranges (except those designed as unvented), water heaters and other gas-fired equipment shall be provided with vent pipes conforming to the requirements for gas vents as specified in s. ILHR 64.48 and for connectors as specified in s. ILHR 64.50. Commercial kitchen appliances including but not limited to ranges, ovens, booster heaters and similar equipment may be vented into the kitchen hood exhaust system.

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History: Cr. Register, December, 1975, No. 240, eff. 1-1-76; am. Register, December, 1978, No. 276, eff. 1-1-79; am. Register, January, 1980, No. 289, eff. 2-1-80; renum. from ILHR 64.50 and am., Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 64.50 Chimney and vent connectors. (1) **CONSTRUCTION AND INSTALLATION.** The construction and installation of chimney connectors shall conform with the following requirements:

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(a) *Concealed space*. No chimney connector shall pass through any outside window, door or combustible outside wall, nor be concealed in any closet, attic or similar space;

(b) *Combustible partitions and walls*. Connectors for appliances shall not pass through interior walls or partitions constructed of combustible material unless they are guarded at the point of passage by:

1. Metal ventilated thimbles not less than 12 inches larger in diameter than the connector, or

2. Metal or burned fireclay thimbles built in brickwork or other approved fireproofing materials extending not less than 8 inches beyond all sides of the thimble;

(c) *Distance from materials*. Connectors shall be installed with clearance to combustibles specified in par. (b) or NFPA Standard 211;

(d) *Multiple appliance venting*. 1. Two or more appliances using the same type of fuel may be connected to a common gravity-type chimney or vent, provided the appliances are equipped with primary safety controls and listed shutoff devices and comply with the following requirements:

a. The appliances shall be located in the same story, except for engineered venting systems,

b. The appliances shall be joined at a manifold or Y-type fitting as close to the chimney or vent as possible, unless the connector from each appliance enters a separate chimney or vent inlet and the inlets are offset at least 12 inches vertically or are at right angles to each other,

c. The connector and chimney or vent shall be sized to accommodate the total volume of flue gases. For gas-burning appliances, the venting area shall be at least equal to the size of the largest vent connector plus at least 50% of the area of the other vent connectors, or

d. A chimney serving a fireplace or other piece of solid-fuel equipment shall not be used to vent any other appliance;

2. Gas utilization appliances and appliances burning liquid fuel may be connected to one chimney flue in accordance with NFPA 211.

(e) *Pitch and length.* Chimney or vent connectors shall have no more than two 45° offsets with the vertical. The horizontal length shall not exceed 75% of the total vertical height of the total venting system measured from the appliance outlet. Chimney or vent connectors shall be pitched up at least ¼ inch per foot from the appliance outlet collar to the chimney or vent inlet;

(f) *Dampers.* A manual cast iron or equivalent damper to control the draft shall be provided in the chimney connector next to solid-fuel fired equipment. Manually operated dampers shall be prohibited in chimney or vent connectors of all other appliances. When used, listed automatically operated dampers interlocked with the heating appliance shall be installed in accordance with the approved listing; and

(g) *Materials and thickness.* 1. Except as specified in subd. 2., chimney or vent connectors shall be listed or conform to the type of material and thickness indicated in Table 64.50 or equivalent.

2. 'Exception'. Connectors serving listed residential-type gas appliances shall be not less than .016 inch galvanized steel.

TABLE 64.50

MINIMUM CHIMNEY CONNECTOR METAL THICKNESS

Galvanized Steel		
Diameter of Connector	Min. thickness (inch)	Gauge
Less than 6 inches	.019	26
6 inches to less than 10 inches	.024	24
10 inches to 13 inches	.030	22
14 inches to 16 inches	.036	20
Greater than 16 inches	.058	16

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (1) (c) and (g) 2., Register, August, 1985, No. 356, eff. 1-1-86; renum. (1) (d) (intro.) and 1 to 4 to be (1) (d) 1. a to d, cr. (1) (d) 2., Register, March, 1991, No. 423, eff. 4-1-91.

A14.31 (3) Food preparation equipment. The following is a reprint of s. ILHR 64.67 (6):

FP ILHR 64.67 (6) AUTOMATIC SUPPRESSION SYSTEMS. Exhaust hoods and ducts in kitchens used for commercial purposes shall be protected by an approved automatic fire suppression system. The suppression system shall comply with the following:

(a) When the fire suppression system is activated, all gas and electrical sources serving cooking appliances, grease consuming appliances or fume incinerators and equipment associated with the hoods shall be automatic-Register, March, 1992, No. 435

cally deactivated. Such gas and electrical sources shall not be capable of reactivation except by manual means after the fire suppression system has been serviced and is again ready for action;

(b) 1. Except as provided in subd. 2., hood and duct suppression systems shall provide for both automatic and manual actuation of the system;

2. Automatic fire sprinkler systems using water need not be provided with means for manual actuation.

(c) A manual station for actuation of the suppression system shall be located at or near one of the means of egress from the area but not nearer than 10 feet to the range hood and shall be securely mounted not less than 4½ feet nor more than 5 feet above the floor, unless otherwise specifically approved by the chief of the fire department having jurisdiction;

(d) The system shall be maintained at full operating capacity by the owner and shall be serviced every 6 months; and

(e) All nozzles shall be accessible for cleaning and replacement.

Note: Effective date for s. ILHR 64.67 (6) requiring automatic fire suppression systems for exhaust hoods was July 1, 1983.

A14.33 (1) Interior finish materials. The following is a reprint of s. ILHR 51.07:

ILHR 51.07 Interior finishes. (1) **SCOPE.** The requirements of this section apply to the interior finishes or surfaces of a building.

Note #1: See s. ILHR 51.06 for the restrictions of foam plastics.

Note #2: Toxicity of the products of combustion is not included as a basis in determining the smoke developed criteria of this section. The smoke developed criteria is based solely upon the obscuration of light.

(2) **APPLICATION TO MATERIALS.** (a) Except as provided in par. (b), the classification of interior finish materials as specified in this section shall include the basic material used by itself or in combination with other materials.

(b) Subsequently applied paint or wall covering not exceeding 1/28 inch in thickness and classified 450 or less on the smoke test scale are exempt from the provisions of par. (a).

(3) **TRIM AND INCIDENTAL FINISH.** (a) Interior finish not in excess of 10% of the aggregate wall and ceiling areas of any room or space may be Class C materials in occupancies where interior finish of Class A or Class B is required.

(b) In addition to the other requirements of this section, foam plastic used as interior trim and incidental finish shall also comply with the following:

1. The minimum density is 20 pounds per cubic foot;

2. The maximum thickness of the trim is ½ inch and the maximum width is 4 inches;

3. The trim constitutes no more than 10% of the area of any wall or ceiling; and

4. The flame-spread rating does not exceed 75 when tested in accordance with ASTM E-84 and the smoke developed rating is not limited.

(4) EXPOSED CONSTRUCTION. (a) This section does not require the installation of interior finish, but where construction or fire protection materials are exposed in rooms or spaces used for the occupancies specified, the hazard from rate of flame spread of the exposed materials shall be not greater than that of the interior finish permitted for such occupancy or use.

(b) Exposed portions of structural members of Type No. 4-Heavy Timber Construction shall not be subject to the interior finish requirements of this section.

(5) USE OF INTERIOR FINISHES. Interior finish material shall be used in accordance with requirements specified in Table 51.07.

TABLE 51.07
MINIMUM INTERIOR FINISH REQUIREMENTS

Occupancy	Required Exit Enclosures ¹		Exit Access ^{1,2}		Rooms or Enclosed Spaces ^{1,2}	
	Walls & Ceilings ⁴	Floor ^{5a}	Walls & Ceilings ⁴	Floor ⁵	Walls & Ceilings ⁴	Floor ^{3,5}
Ch. ILHR 54 Occupancies Other than Storage and Warehouses	A	II	A or B	II	A, B or C	DOC FF-16
Ch. ILHR 54 Storage and Warehouse Occupancies	A or B	DOC FF-16	A or B	DOC FF-16	A, B or C	DOC FF-16
Ch. ILHR 55 Places of As- sembly	A	I	A	II	A or B ⁷	DOC FF-16
Ch. ILHR 56 Places of In- struction	A	I	A or B	II	A, B or C	DOC FF-16
Ch. ILHR 57 Residential Oc- cupancies	A	II	A or B	II	A, B or C	DOC FF-16
Ch. ILHR 58 Health Care and Places of Detention	SEE CHAPTER ILHR 58 FOR SPECIFIC REQUIREMENTS					
Ch. ILHR 59 Hazardous Oc- cupancies	A	DOC FF-16	A or B	DOC FF-16	A, B or C	DOC FF-16
Ch. ILHR 60 Day Care Cen- ters (20 Children or Less)	A or B	DOC FF-16	A or B	DOC FF-16	A, B or C	DOC FF-16
Ch. ILHR 60 Day Care Cen- ters (More than 20 Chil- dren)	A	II	A or B	II	A, B or C	DOC FF-16
Ch. ILHR 62 Specialty Oc- cupancies	A, B or C	DOC FF-16	A, B or C	DOC FF-16	A, B or C	DOC FF-16

Notes to Table 51.07

¹ Exposed portions of structural members of Type No. 4-Heavy Timber Construction are not subject to the requirements of this table.

² Where a complete automatic sprinkler system is installed, materials with an interior finish of Class B or C may be used in places where Class A or B materials, respectively, are required and floor finish materials with an interior finish of Class II or materials complying with the DOC FF-1-70 "pill test" may be used in places where Class I or II materials, respectively, are required.

³ Requirements for rooms or enclosed spaces are based upon the spaces being separated from exit access corridors and exits by partitions extending from the floor to the ceiling. Where the room or enclosed space is not separated from the exit access corridor, the room or space is considered part of the exit access or the exit.

⁴ Materials having napped, tufted, looped or similar surfaces, such as carpet, when applied on walls or ceilings shall meet the requirements for Class A interior finish.

⁵ Wood, vinyl, linoleum, terrazzo, resilient and other approved finished floors or floor covering materials are exempt from the provisions of this table.

⁶ All carpet manufactured for sale in the U.S. is required by federal regulations to comply with the DOC FF-1-70 "pill test" (16 CFR Para 1630). If a material other than carpet is used, the material should be shown to be resistant to flame propagation as a material which passes the DOC FF-1-70 test (minimum critical radiant flux of 0.04 watts/cm²).

⁷ Class C interior finish materials may be used in places of assembly with a capacity of 400 persons or less.

(6) APPLICATION OF INTERIOR FINISH. (a) *Attachment.* Interior finish materials shall be applied or otherwise fastened in such a manner that they will not readily become detached when subjected to room temperature of 200° F. or less for 30 minutes, or otherwise become loose through changes in the setting medium from the effects of time or conditions or occupancy.

(b) *Application to structural elements.* 1. Interior finish materials applied to walls, ceilings or structural elements of a building or structure which are required to be of fire-resistive rated or noncombustible construction shall be applied directly against the exposed surface of such structural elements or to furring strips attached to such surfaces.

2. Where furring strips are used, all concealed spaces shall be firestopped into areas not greater than 10 square feet in area or 8 feet in any dimension.

(c) *Furred construction.* Where walls, ceilings or other structural elements are required to be of fire-resistive rated or noncombustible construction, and the interior finish is set out or dropped distances greater than 1¼ inches from the surface of the elements, only material of which both faces qualify as Class A shall be used, unless the finish material is protected on both sides by an approved automatic fire suppression system or is attached to a noncombustible backing as specified in par. (e) or to furring strips applied directly to such backing as specified in par. (b).

(d) *Class B and C finish materials.* Interior finish materials, other than Class A materials, which are less than ¼ inch in thickness shall be applied directly against a noncombustible backing or a backing of fire-retardant treated wood unless the tests under which the material has been classified were made with the materials suspended from the noncombustible backing.

(e) *Backing material.* 1. Backing for interior finish materials shall be a continuous surface with permanently tight joints, equal in area to the area of the finish, and extending completely behind such finish in all directions.

2. Backing shall be of noncombustible or fire retardant treated wood materials.

3. When the backing does not constitute an integral part of the structural elements or system, it shall be attached directly to the structural elements or to furring strips as specified in par. (b) or may be suspended from the structural members at any distance provided concealed spaces are firestopped as specified in s. ILHR 53.63 (1).

Note: See s. ILHR 51.01 (75a) for further explanatory information.

Class A Interior Finish — flame spread 0-25, smoke developed 0-450.

Class B Interior Finish — flame spread 26-75, smoke developed 0-450.

Class C Interior Finish — flame spread 76-200, smoke developed 0-450.

Class I Interior Floor Finish — critical radiant flux — .45 watts/cm²

Class II Interior Floor Finish — critical radiant flux — .22 watts/cm²

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. table, Register, October, 1982, No. 322, eff. 11-1-82; renum. (3) to be (3) (a), cr. (3) (b) and (6), Register, December, 1983, No. 336, eff. 1-1-84; am. (6) (d) (intro.), Register, August, 1985, No. 356, eff. 1-1-86.

A14.35 Fire prevention, detection and protection systems requirements. The following is a reprint of ss. ILHR 51.21 to 51.245.

ILHR 51.21 Standpipe and hose systems. (1) GENERAL REQUIREMENTS. All required standpipe and hose systems shall meet the requirements of this section.

Note: The department will accept installations conforming to the latest edition of NFPA No. 14—Standard for Installation of Standpipe and Hose Systems.

(2) **CLASSES OF SERVICE.** (a) *Class I - Fire department standpipes.* For use by fire departments and those trained in handling heavy fire streams from a 2½-inch hose.

(b) *Class II - First-aid standpipes.* For use primarily by occupants of a building until the arrival of the fire department (1½-inch hose).

(c) *Class III - Combination fire department and first-aid standpipes.* For use by either fire departments and those trained in handling heavy hose streams or by the building occupants.

(d) *Dry standpipes.* For use by fire departments.

(3) **CLASS I - FIRE DEPARTMENT STANDPIPES.** (a) *Where required.* Fire department standpipes shall be provided for all buildings exceeding 60 feet in height.

1. Required standpipes shall be installed as construction progresses, to make them available for fire department use in the topmost floor constructed. Temporary standpipes may be provided in place of permanent standpipes during the period of construction when approved by the local fire department.

(b) *Number of standpipes.* Standpipes shall be sufficient in number so that any part of every floor area can be reached within 30 feet by a nozzle attached to 100 feet of hose connected to the standpipe in an unsprinklered building and 150 feet of hose in a sprinklered building.

(c) *Cross connections.* When 2 or more standpipes are required, they shall be cross connected and equipped with individual control valves. All control valves shall be of an approved indicating type valve. The valves shall be located so that the water supply to any standpipe riser can be shut off without interrupting the water supply to the remaining standpipes and be readily accessible to the fire department.

(d) *Location of outlets.* Hose outlets shall be located in stairway enclosures. Where stairways are not enclosed, outlets shall be at the inside of outside walls, within one foot of a smokeproof tower, interior stairway or fire escape. In buildings containing large interior areas, standpipes may be located at accessible interior locations.

(e) *Protection of standpipes.* Standpipes shall be protected against mechanical and fire damage. Dry standpipes shall be visible for inspection and not concealed.

Note: It is not the intent of this section to require standpipes to be protected with an hourly rated fire protection.

(f) *Size.* No required standpipe shall be less than 4 inches in diameter, and not less than 6 inches in diameter for standpipes in excess of 100 feet in height unless the building is completely sprinklered and the standpipe system is hydraulically designed in accordance with the requirements of sub. (6).

(g) *Hose valves and connections.* An approved 2½-inch hose-connection valve shall be located at each story, not less than 3 feet nor more than 6 feet above the floor level. Hose-connection valves shall be equipped with a tight-fitting cap on a chain and having lugs for a spanner wrench. When the building is completely sprinklered, and class II service is omitted, each standpipe outlet location shall be equipped with a 2½-inch hose valve, a 2½-inch by 1½-inch reducer, and a cap with an attached chain.

(h) *Hose threads.* All threads on hose connections shall be of national standard dimensions.

Note: Section 213.15, Stats., requires that all hose connections be fitted with the national standard hose threads adopted by the national fire protection association.

(i) *Fire department connection.* An approved fire department connection shall be installed on a 4-inch or larger pipe connection with each standpipe system. The connection shall be marked "Standpipe". If automatic fire sprinklers are also supplied by the hose connection, the sign shall read "Standpipe and Automatic Sprinkler". The elevation of the connection may be not less than 18 inches nor more than 42 inches above the sidewalk or ground. If municipal water is available at the building site, the fire department connection shall be located as close as possible to and within 150 feet of any fire hydrant.

(j) *Automatic water supply.* An automatic water supply for a wet standpipe system shall be designed to provide not less than the following capacity from top outlets at not less than 65 psi flowing pressure for a period of 30 minutes; 500 gpm for a single standpipe; 750 gpm for 2 interconnected standpipes; 1,000 gpm for larger systems. Any of the following supplies will be acceptable:

1. Public waterworks system where pressure and discharge capacity are adequate;
2. Approved automatic fire pump (or pumps);
3. Pressure tank;
4. Gravity tank;
5. Approved manually controlled fire pump operated by remote control devices at each hose outlet; or
6. Reservoirs.

(k) *Dry standpipes.* If only one standpipe is required, a dry standpipe may be used. A dry standpipe shall be limited to a single riser and shall not exceed 150 feet in height.

(4) **CLASS II - FIRST-AID STANDPIPES.** (a) *Where required.* First-aid standpipes shall be provided as required by the occupancy chapters of this code.

(b) *Number and location.* Standpipes shall be sufficient in number so that any part of every floor area, including basements, can be reached within 30 feet by a nozzle attached to not more than 100 feet of hose connected to a standpipe.

1. Hose outlets shall be located in occupied areas and preferably in corridors or at interior columns.

(c) *Size.* No required standpipe shall be less than 2 inches in diameter for buildings 4 or less stories or 50 feet in height, and not less than 2½ inches in diameter for buildings exceeding 4 stories or 50 feet in height.

(d) *Hose valves and connections.* An approved 1½-inch hose valve shall be located not more than 5 feet above the floor level. Where the static pressure at any standpipe hose outlet exceeds 100 psi, an approved device shall be installed at the outlet to reduce the pressure with the required flow at the outlet to not more than 100 psi.

(e) *Hoses.* Not more than 100 feet of hose shall be attached to each outlet. Hoses shall be of an approved type, 1½-inches in diameter, with ½-inch solid stream or combination nozzle attached, and shall be located in approved cabinets, racks or reels. In locations where the use of a solid stream may contribute to the spread of fire by scattering the burning material or where the existence of flammable liquids make the use of spray stream desirable, combination nozzles which give a spray or a solid stream shall be provided instead of ½-inch nozzles.

(f) *Water supply.* An automatic water supply shall be provided. The water supply shall be designed for 100 gpm for 30 minutes with 65 psi flowing pressure at the top outlet. The water supply may be from a city connection, gravity tank, pressure tank or pump.

Note #1: The department will permit the domestic water supply to service class II standpipes provided no intervening control valves are installed to interrupt the service of the standpipe and a check valve is installed to prevent contamination of the domestic water supply.

Note #2: The department will permit pumps, other than fire pumps, provided the water supply meets the requirements of sub. (4) (f).

Note #3: See ch. ILHR 82 for requirements pertaining to cross connections.

(5) CLASS III — COMBINED FIRE DEPARTMENT AND FIRST-AID STANDPIPES. (a) *Where permitted.* The features of class I and II service may be combined in a single system if served by an acceptable automatic water supply conforming to the requirements of sub. (3) (j).

(b) *Requirements.* Class III standpipes shall conform to the requirements of class I service except that 1½-inch outlets with a hose and 2½-inch outlets shall be provided on each floor and shall be installed to the requirements of the respective classes of service.

(6) DRY STANDPIPES. (a) *Where required.* Dry standpipes shall be provided as required by chs. ILHR 54 to 62.

Note: See ss. ILHR 54.15, 55.33, 56.20, 57.15 and 62.30.

(b) *Number and location.* Required dry standpipes shall be provided in each stair enclosure.

(c) *Hose valves and connections.* 1. Required dry standpipes shall be provided with approved 2½ inch valve hose connections at each floor level with one connection in the stair tower and one immediately outside.

2. Required dry standpipes with a fire department siamese connection greater than 50 feet to a street shall be interconnected to a standpipe system with the connection 50 feet or less to a street.

(d) *Miscellaneous requirements.* Dry standpipes shall conform to the requirements specified in sub. (3) (e) to (i).

(7) **COMBINED AUTOMATIC SPRINKLER AND STANDPIPE SYSTEM.** (a) *Definition.* A combined system is a system where the vertical water piping serves both the automatic sprinkler system and the 2½-inch hose outlets of the standpipes used by the fire department. The combined system shall comply with the automatic sprinkler requirements of s. ILHR 51.23 and the standpipe and hose requirements of s. ILHR 51.21.

(b) *Water supply and riser size.* The minimum water supply and riser size for a combined system shall comply with the requirements of sub. (3) (f) and (j), except the minimum water supply for a combined system for a completely sprinklered, light hazard occupancy building shall be 500 gallons per minute. When the building is completely sprinklered, the risers may be sized by hydraulic calculations.

Note: NFPA No. 13—Standard for Installation of Sprinkler Systems, defines light hazard occupancy as occupancies where the quantity and/or combustibility is low and fires with relatively low rates of heat release are expected, such as: churches; clubs; educational; hospitals; institutional; libraries, except large stack rooms; museums; nursing or convalescent homes; offices, including data processing; residential; restaurant seating areas; theaters and auditoriums, excluding stages and prosceniums.

(c) *Connections.* Each connection from a vertical riser of a combined system shall be provided with an individual control valve of the same size as the outlet.

(8) **MAINTENANCE.** Standpipe systems and equipment, whether required by this code or not, shall be maintained in an operable condition.

History: 1-2-56; r. and recr. Register, December, 1976, No. 252, eff. 1-1-77; am. (7), Register, December, 1978, No. 276, eff. 1-1-79; am. (3) (i), Register, June, 1983, No. 330, eff. 7-1-83; emerg. renum. (6) and (7) to be (7) and (8), cr. (2) (d) and (6), eff. 9-6-86; renum. (6) and (7) to be (7) and (8), cr. (2) (d) and (6), Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 51.22*Fire extinguishers. (1) **GENERAL.** All required fire extinguishers shall comply with the provisions of NFPA No. 10.

(2) **INSTALLATION:** Fire extinguishers as specified in chs. ILHR 54-62 shall be installed as specified in NFPA No. 10.

(3) **MAINTENANCE.** All portable fire extinguishers, whether required by chs. ILHR 54-62 or not, shall be maintained in operable condition as specified in NFPA No. 10.

History: 1-1-56; am. Register, October, 1967, No. 142, eff. 11-1-67; r. and recr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, December, 1983, No. 336, eff. 1-1-84; am. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 51.23 Automatic sprinklers. (1) **GENERAL REQUIREMENTS.** (a) All automatic fire sprinkler systems shall be designed and installed in accordance with NFPA No. 13 except as permitted in chs. ILHR 54 to 62.

(b) 1. A sprinkler system shall be so designed, installed and maintained as to provide complete coverage for all portions of the building, except:

2. Sprinkler heads may be omitted within a room dedicated exclusively to electrical equipment provided:

a. The room is separated from other portions of the building by at least one-hour fire-resistive construction;

*See Appendix A for further explanatory material.

b. The room is equipped with a smoke detector the activation of which is either audible throughout all the occupied areas of the building or interconnected to a manual fire alarm system; and

c. The storage of combustible materials within the room is prohibited.

Note: See ch. ILHR 18 for requirements pertaining to automatic fire sprinkler system protection for elevators.

(c) Reinstallation of used sprinkler heads shall be prohibited.

(d) Approved secondhand devices other than sprinkler heads may be installed by special permission of the department.

Note: The department will accept equipment, materials and devices listed or labeled by Underwriters' Laboratories or approved by Factory Mutual. Other testing laboratories or inspection agencies will be recognized as an approved agency if accepted in writing by the department.

(2) WATER SUPPLY. (a) Approved automatic water supplies for the sprinkler system recognized by the department are listed below:

1. City water main;

2. Gravity or pressure tank;

3. Ground storage reservoir; or

4. Natural bodies of water approved by the department (lakes, rivers, streams, etc.).

(b) If the water supply has inadequate pressure, an approved fire pump or tank shall be provided. The design and installation of water supply facilities for gravity tanks, fire pumps, reservoirs or pressure tanks, and underground piping shall conform to NFPA No. 22, NFPA No. 20, and NFPA No. 24.

(3) BASEMENT SPRINKLERS. Every basement sprinkler system shall also include sprinklers in all shafts (except elevator shafts) leading to the story above.

(4) FIRE DEPARTMENT CONNECTION. Except as provided in s. ILHR 57.016 (1) (a), every automatic fire sprinkler system installed in accordance with NFPA No. 13 shall have an approved fire department connection as specified in NFPA 13. The connection shall be marked "Sprinkler". If standpipes are also supplied by the hose connection, the sign shall read "Standpipe and Automatic Sprinkler". The elevation of the connection shall be not less than 18 inches nor more than 42 inches above the sidewalk or ground. If municipal water is available at the building site, the fire department connection shall be located within 150 feet of a municipal fire hydrant.

(5) SPRINKLER ALARMS. Every sprinkler system shall be provided with a suitable audible alarm. In all buildings over 60 feet in height, each sprinkler system on each floor shall be equipped with a separate water flow device connected to an alarm system.

(6) MAINTENANCE. (a) All installed automatic sprinkler systems, whether required by this code or not, shall be properly maintained for efficient service pursuant to NFPA No. 13A. Owners or operators shall be responsible for the condition of their sprinkler system and shall use due diligence in keeping the system in good operating condition. A copy of Register, March, 1992, No. 435

the inspection report as specified in NFPA No. 13A shall be kept and shall be made available, upon request, to the department or its authorized deputies. The local fire department shall be notified whenever the automatic fire sprinkler system is shut down or impaired and when it is placed back in service. The owner shall arrange for immediate and continual servicing or repair of the automatic fire sprinkler system until it is placed back in operation.

(b) The requirements of par. (a) shall apply to all buildings in existence on the effective date of this section and to those buildings constructed thereafter.

Note: See ss. ILHR 81.10 (6) and 81.11 (9) and s. 145.165, Stats., for additional requirements pertaining to maintenance and repair or automatic fire sprinkler systems.

(7) **PARTIAL AUTOMATIC FIRE SPRINKLER SYSTEMS.** Partial automatic fire sprinkler systems may be connected without a fire department connection to the domestic water supply service or a first-aid standpipe or a fire department standpipe provided the following conditions are satisfied:

(a) The number of sprinkler heads per building does not exceed 20;

(b) The connection is equipped with an approved indicating valve with a monitor or an approved locking device and a check valve;

(c) The water pressure and volume is adequate to supply the required flow of the largest number of sprinkler heads in any one of the enclosed areas;

(d) An audible alarm is provided to sound when the system is in operation; and

Note: See ch. ILHR 82 for requirements pertaining to cross connections.

(e) A pressure gauge and test valve are provided to facilitate the testing and maintenance of the system in accordance with sub. (6).

(8) **SUBSTITUTE AUTOMATIC FIRE SUPPRESSION SYSTEMS.** When approved by the department, substitute automatic fire suppression systems may be used in lieu of an automatic fire sprinkler system in areas where the use of water could cause unusual damage to equipment, or where water may have a limited effect or may be hazardous to use because of the nature of processes involved.

(9) **SYSTEM SUPERVISION AND MONITORING.** The height limitations and fire resistive ratings in s. ILHR 51.02 (21) and (22) and the unlimited area buildings specified in chs. ILHR 54 to 62 shall be permitted only where the automatic fire sprinkler system is equipped with supervised sprinkler system valves or other approved component indicators, such as but not limited to fire pump power indicator or low water level indicator. The supervision function of the automatic fire sprinkler system shall be monitored by a central station, remote, auxiliary or proprietary fire alarm system company.

History: 1-2-56; r. and recr. Register, December, 1974, No. 228, eff. 1-1-75; cr. (7) (a), Register, December, 1976, No. 252, eff. 1-1-77; am. (6), Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. (1), (4), (6) and (7), cr. (8), Register, June, 1983, No. 330, eff. 7-1-83; am. (6), Register, December, 1983, No. 336, eff. 1-1-84; emerg. am. (1) (a), (4) and (6) (a), cr. (9), eff. 9-6-86; am. (1) (a), (4) and (6) (a), cr. (9), Register, November, 1986, No. 371, eff. 12-1-86; am. (1) (a), (2) (b), (4), (6), (7) (c) and (d), r. and recr. (1) (b), cr. (7) (e), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 51.24 Fire alarm systems. Interior fire alarm systems required under ss. ILHR 54.17, 56.19 and 57.17 shall be designed and constructed in conformity with the following requirements:

(1) All such alarm systems shall consist of operating stations on each floor of the building, including the basement, with bells, horns, or other approved sounding devices which are effective throughout the building. The system shall be so arranged that the operation of any one station will actuate all alarm devices connected to the system except in the case of a presignal system. Fire alarms shall be readily distinguishable from any other signalling devices used in the building. A system designed for fire alarm and paging service may be used if the design is such that fire alarm signals will have precedence over all others;

(a) In all buildings where a fire alarm system and a complete automatic sprinkler system are required, a water flow detecting device shall be provided to actuate the fire alarm system.

(2) Every fire alarm system shall be electrically operated or activated by non-combustible, nontoxic gas. Electrically operated systems shall be operated on closed circuit current under constant electrical supervision, so arranged that upon a circuit opening and remaining open or in case of a ground or short circuit in the ungrounded conductor, audible trouble signals will be given instantly. Gas-activated systems shall be mechanically supervised and under constant gas pressure, so arranged that in case of a pressure drop an audible trouble signal will be given instantly. Means shall be provided for testing purposes;

(3) (a) Except as provided in par. (b), coded fire alarm systems shall be provided in buildings more than 3 stories in height and the systems shall be so arranged that the code transmitted shall indicate the location and story of the structure in which the signal originated.

(b) 1. The department shall approve non-coded continuous sounding fire alarm systems under constant automatic supervision in apartment buildings.

2. The department shall approve non-coded continuous or march time sounding fire alarm systems with electrically supervised annunciator panels that indicate the location and the story of the structure in which the signal originated.

3. The department shall approve fire alarm and communication systems for high rise construction as specified in s. ILHR 52.01 (2) (e).

(4) Operating stations shall be prominently located in an accessible position at all required exit doors and required exit stairways. Operating stations shall be of an approved type and shall be conspicuously identified. All such operating stations shall be of a type, which after being operated, will indicate that an alarm has been sent therefrom until reset by an authorized means. (Operating stations having a "Break Glass" panel will be acceptable. On coded systems having a device to permanently record the transmission of an alarm, "Open Door" type stations may be used). The fire alarm operating stations shall be mounted not less than 3 feet nor more than 4 feet above the finished floor as measured from the floor to the center of the box;

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(5) All alarm systems shall be tested at least once a month and a record of the tests shall be kept;

(6) Existing fire alarm systems that are effective in operation will be accepted if approved by the department;

(7) The gas for operation of non-combustible, non-toxic gas activated fire alarm systems shall be supplied from approved pressure cylinders on the premises. The cylinders shall have sufficient capacity and pressure to properly operate all sounding devices connected to the system for a period of not less than 10 minutes. Cylinders shall be removed for recharging immediately after use and shall be replaced by fully charged cylinders;

(8) Spare cylinders shall be kept on the premises at all times for immediate replacement and separate cylinders for testing shall be incorporated in the system;

(9) Tubing in connection with non-combustible, non-toxic gas activated fire alarm systems shall be installed in rigid metal conduit, flexible metal conduit, or surface metal raceways where subject to mechanical injury. Non-corrosive metallic tubing not less than 3/16" in diameter which will withstand a bursting pressure of not less than 500 pounds per square inch shall be used. The maximum length of 3/16" tubing shall not exceed 300 feet between charged cylinders. All tubing and other component parts shall be installed by skilled workers in accordance with the provisions of this code; and

Note: See Wisconsin State Electrical Code, Volume 2, ch. ILHR 16.

(10) **MAINTENANCE.** All fire alarm systems, whether required by this code or not, shall be maintained in an operable condition. **FP**

History: 1-2-56; am. (4) (a), Register, November, 1963, No. 95, eff. 12-1-63; am. Register, August, 1964, No. 104, eff. 9-1-64; r. (10), (11) and (12), Register, December, 1975, No. 240, eff. 1-1-76; cr. (1) (a) and am. intro. and (2), Register, December, 1976, No. 252, eff. 1-1-77; am. (intro.) and (4), r. (3) (a), Register, January, 1980, No. 289, eff. 2-1-80; am. (3) and (6), cr. (10), Register, December, 1981, No. 312, eff. 1-1-82; am. (5), Register, August, 1985, No. 356, eff. 1-1-86; emerg. r. and recr. (3), eff. 9-6-86; r. and recr. (3), Register, November, 1986, No. 371, eff. 12-1-86; am. (2), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 51.245 Smoke detectors. (1) **GENERAL REQUIREMENTS.** All required smoke detectors shall be approved by the department and shall comply with the provisions of NFPA No. 72E-1982 — Standard on Automatic Fire Detectors or NFPA No. 74-1980 — Household Fire Warning Equipment.

(2) **INSTALLATION.** (a) Smoke detectors and smoke detector systems shall be installed in accordance with the provisions of NFPA No. 72E-1982 — Standard on Automatic Fire Detectors or NFPA No. 74-1980 — Household Fire Warning Equipment and in accordance with the manufacturer's directions and specifications.

(b) Except as provided in s. ILHR 57.16 (2) (b), all smoke detectors interconnected with each other or with the manual fire alarm system shall be installed in accordance with the provisions of NFPA No. 72A-1979 — Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems for Guard's Tour, Fire Alarm and Supervisory Service. Where smoke detectors are interconnected with the manual fire alarm system, the smoke detectors shall be wired in accordance with the provisions specified in s. ILHR 16.34.

(3) **MAINTENANCE.** Smoke detectors shall be maintained as follows, except as noted in s. ILHR 57.16:

- (a) The owner shall be responsible for maintaining the smoke detectors and the smoke detection system in good working order;
- (b) Tenants shall be responsible for informing the owner, in writing, of any smoke detector malfunction, including the need for a new battery;
- (c) The owner shall have 5 days upon receipt of notice from the tenant to repair or replace the smoke detector or replace the battery; and
- (d) The owner shall furnish to the tenant written notice of the responsibilities of the tenant and the obligations of the owner regarding smoke detector maintenance.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2) and (3) (c), Register, October, 1982, No. 322, eff. 11-1-82; am. (1) and (2) (a) Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. (3), Register, April, 1990, No. 412, eff. 5-1-90.

A14.47 Means of egress. The following is a reprint of ss. ILHR 51.15 to 51.20 and related sections from the occupancy chapters:

ILHR 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: See ss. ILHR 54.06, 55.10, 56.08, 57.06, 58.04, 58.49, 59.14, 60.12, 61.12, 62.26, 62.47 and 62.75 for requirements regarding required exits.

(2) Every standard exit door shall swing outward or toward the natural means of egress. 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, overhead door or sliding door shall be considered as a standard exit, except as permitted in ss. ILHR 54.06, 55.10 and 59.13.

(3) (a) 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. The latch or other approved fastening device on the door shall be of an obvious method in its release. Except as provided in pars. (b) to (d), the installation of hardware requiring use of a key for opening an exit door from the inside is prohibited. The requirements of this subsection, except par. (g) shall apply to all buildings in existence and to any building built after the effective date of this subsection.

(b) Exit and exit access doors serving individual living units may be provided with hardware requiring the use of a key for opening from the inside.

(c) Upon written request to the department by the owner, key-locking, or securing, of exits may be approved in fire-resistive buildings, or parts of fire-resistive buildings, which are used as jails, prisons, mental institutions, asylums, nursing homes with senile patients, and similar type occupancies.

Note #1: The owners 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 #2: 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.

(d) 1. One door serving as an exit from any building housing any office or wholesale or retail store may be equipped with hardware which requires use of a key to open it from the inside provided one of the following conditions is satisfied:

a. The door has a window which has a minimum clear opening of not less than 24 inches, and 6 square feet in area with the bottom of the window opening not more than 4 feet above the inside floor level;

b. A glazed sidelight satisfying the dimensional and location requirements for the windows specified in par. (a) is located adjacent to the door; or

c. A window satisfying the dimensional and location requirements for the window specified in par. (a) is located within five feet of the door.

2. Approved safety glazing shall be used in all installations but the glazing may not be bullet-resistant or break-resistant.

3. The door may not be used as an exit serving any required exit stairway enclosure.

4. The door shall not be key-locked during periods of occupancy by the public or employes. A readily visible, permanent sign shall be placed on or adjacent to the door on the egress side stating, "THIS DOOR SHALL NOT BE KEY-LOCKED WHEN THE BUILDING IS OCCUPIED". The sign shall be in letters at least one inch in height on a contrasting background.

5. The use of keyed hardware as specified in this section may be revoked by the department or its authorized deputy upon one violation of any of the conditions specified in subds. 1. to 4.

(e) 1. Except as provided in subd 2., the door shall not be barred, bolted or chained at any time.

2. When authorized persons, such as employes, frequenters, patrons and other such occupants are not present, the exit door may be secured by the use of a single bar or bolt. A sign or label shall be posted on the door near the single bar or bolt. The sign or label shall bear the following: "This bolt or bar shall be kept open during periods of occupancy."

Note: The intent of subd. 2. 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 security against intruders from the outside while protecting persons in the building from being trapped.

(f) 1. Except as provided in subd. 2, in a building protected throughout by either a supervised automatic fire sprinkler system or a supervised automatic fire detection system, the exit doors may be equipped with listed, locking devices which shall:

a. Release or unlock upon activation of the sprinkler system or fire detection system;

b. Release or unlock upon the loss of power to the locking device;

c. Release or unlock within 15 seconds whenever a force of not more than 15 pounds of force is continuously applied to the release device for a period of not more than 3 seconds;

d. Upon the release or unlocking of the door activate an audible alarm in the vicinity of the door;

- e. Require the manual relocking of such doors; and
 - f. Have a sign adjacent to the locking device indicating how the door may be opened.
2. The use of locking devices as described in subd. 1 shall be limited to the following restrictions.
- a. The locking device may not be employed on any door of an occupancy designated or licensed as a community based residential facility.
 - b. The locking devices may not be employed on any doors serving as the main entrance/exit of an assembly hall occupancy regulated under ch. ILHR 55.
 - c. Not more than one locking device may be employed in any egress path within a health care facility regulated under ch. ILHR 58, subch. I.

(g) 1. Except as provided in subd. 2., the latch or other approved fastening device shall be located on the exit door so that the device is not less than 32 inches or more than 54 inches above the floor level.

2. The latch or approved fastening device on solid tempered glass doors may be located on the door at the floor line.

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(4) A standard exit door shall not be less than 6 feet 4 inches high by 3 feet 0 inches wide, except where especially provided under occupancy classifications and in s. ILHR 51.20. Where double doors are provided with or without mullions, the width of each single door may be reduced to 2 feet 6 inches, except double doors utilized to provide accessibility in accordance with s. ILHR 52.04 shall have the width of at least one single door increased to 2 feet 8 inches.

(5) (a) All exit doors, unless otherwise exempted by the occupancy requirements of this code, shall be identified by illuminated translucent exit signs.

- 1. An exit sign shall bear the words "EXIT" or "OUT".
- 2. The wording for the exit sign shall be of letters not less than 6 inches high with principal strokes of letters not less than $\frac{3}{4}$ inches wide.
- 3. The wording for the exit sign shall be of red or green lettering on a contrasting background.
- 4. A self-luminous type of exit sign which provides evenly illuminated letters shall have a minimum luminance of 0.06 foot lamberts; other types of exit signs shall be illuminated by a source providing not less than 5 foot candles at the illuminated surface.

(b) When exit doors are not readily visible to occupants, directional exit signs shall be provided in exit access corridors and other appropriate locations so to indicate the direction and way of egress.

(6) * (a) The required aggregate width of exits from a level shall be determined by using the full occupant load of that level, plus the percentage effects of the occupant loads of adjacent levels (above and below) which exit through it as follows:

*See Appendix A for further explanatory material.

1. 50% of the occupant load of each first-adjacent level; and
2. 25% of the occupant load of each second-adjacent level.

(b) The width shall be based upon the following ratios:

1. Types No. 1 through No. 4 construction unsprinklered, 40 inches per 100 persons;
2. Types No. 5 through No. 8 construction unsprinklered, 50 inches per 100 persons;
3. Types No. 1 through No. 4 construction sprinklered, 30 inches per 100 persons; or
4. Types No. 5 through No. 8 construction sprinklered, 40 inches per 100 persons.

Note: The determination of exit width for health care facilities is specified in s. ILHR 58.12 (2) and (3) and takes precedence over this section.

(c) The required aggregate width of exits from assembly seating facilities shall comply with the requirements of s. ILHR 62.75 (4).

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. (5) and cr. (7), Register, November, 1963, No. 95, eff. 12-1-63; r. and recr., Register, October, 1967, No. 142, eff. 11-1-67; am. (7) (j), Register, May, 1968, No. 149, eff. 6-1-68; r. and recr. (7), Register, December, 1970, No. 180, eff. 1-1-71; r. and recr. (3), Register, February, 1971, No. 182, eff. 3-1-71; am. (7) (a) 1., Register, September, 1973, No. 213, eff. 10-1-73; r. (7), r. and recr. (6), Register, December, 1974, No. 228, eff. 1-1-75; emerg. cr. (3) (b) 1., eff. 6-20-75; cr. (3) (a) 1. and (3) (b) 1., Register, November, 1975, No. 239, eff. 12-1-75; am. (4), Register, December, 1977, No. 264, eff. 1-1-78; am. (2) and (3) (b) 1., Register, December, 1978, No. 276, eff. 1-1-79; am. (4), Register, January, 1980, No. 289, eff. 2-1-80; am. (2), r. and recr. (3) (a), (intro.), cr. (6) (c), Register, December, 1981, No. 312, eff. 1-1-82; cr. (3) (c), Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. (3), Register, January, 1985, No. 349, eff. 2-1-85; am. (3) (a) and (4), cr. (3) (e) and (f), Register, August, 1985, No. 356, eff. 1-1-86; am. (2), (3) (a), renun. (3) (f) to be (3) (g), cr. (3) (f), r. and recr. (5), Register, February, 1991, No. 423, eff. 4-1-91.

ILHR 51.151 Exit distribution. All spaces which can accommodate more than 25 persons shall be provided with a minimum of 2 exits, 2 exit access doors or a combination of both which are located to provide the best possible egress from the room or suite. If exit access doors are used, the exit access corridors shall lead to 2 or more separate exits.

Note 1: See Appendix A for further explanatory material.

Note 2: See occupancy chs. ILHR 54 to 62 for acceptable types of exits and exit accesses and exceptions.

History: Cr. Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 51.16 Stairways and ramps (1) DEFINITIONS. (a) "Stairway" means one or more flights of steps, and the necessary platforms or landings connecting them, to form a continuous passage from one elevation to another, including exterior porches, platforms and steps.

(b) "Ramp" means a sloping floor or walk and necessary platforms or landings connecting them to form a continuous passage from one elevation to another.

(2) **REQUIRED AGGREGATE WIDTH.** (a) The required aggregate width of stairway or ramp exits from any level shall be as specified in s. ILHR 51.15 (6).

(b) In no case shall the minimum width of an exit stair or ramp be less than that specified in sub. (3).

(c) Under no circumstances shall stairways or ramps decrease in width in the line of travel toward the exit.

(3) MINIMUM WIDTH. (a) Except as provided in par. (b), every required exit stairway or ramp under chs. ILHR 54 to 62 shall be not less than 3 feet 8 inches wide, except as provided in the occupancy chapters, of which not more than 4 inches on each side may be occupied by a handrail. The clear dimension between handrails, or stringers, shall not be less than 3 feet 0 inches.

(b) Nonrequired stairways or ramps need not conform to the width requirements specified in chs. ILHR 50 to 64.

(4) RISERS, TREADS AND RAMP SLOPES. Risers and treads shall be designed and provided in accordance with the following:

(a) All stairways and steps shall have a rise of not more than 7¾ inches and a tread not less than 9½ inches, measured from tread to tread and from riser to riser. The slope of a tread may not exceed ¼ inch per foot for the depth of the tread. Treads and risers shall be uniform in any one flight. Winders shall not be used;

Note #1: The department recommends that steps be proportioned so the sum of 2 risers and a tread, exclusive of its nosing or projection, should be not less than 24 inches or more than 25 inches.

Note #2: The department may accept nonstandard exit stairways serving unoccupied areas, such as equipment mezzanines or platforms, and similar areas, if approved in writing.

Note #3: Round or smooth nosings are recommended as they are not difficult to negotiate for individuals with restrictions in the knee, ankle or hip, or with artificial legs or long leg braces.

(b) The edges of all treads and the edges of all stairway landings shall be finished with a nonslippery surface not less than 3 inches in width;

(c) Where an exit door leads to an outside platform or sidewalk, the level of the platform or sidewalk shall not be more than 7¾ inches below the doorsill;

(d) Every stairway flight shall have at least 3 risers, except as provided in par. (c) and ss. ILHR 54.03 (1) (b), 55.09 (3) (b) and 57.07 (1); and

(e) There shall be no more than 22 risers in any one flight.

(f) 1. Ramp slopes of required exit ramps may not exceed 1:8.

2. Ramp slopes of all ramps not included under subd. 1. may not exceed 1:6.

Note: See s. ILHR 52.04 (7) for ramp requirements for barrier free design.

(g) Ramps and landings shall be finished with a slip-resistant surface.

(5) STAIRWAY AND RAMP LANDINGS AND PLATFORMS. (a) 1. Except as provided in subd. 2., if a door is provided at the head or foot or both of a stairway or ramp, a landing or platform shall be placed between the door and the stairway or ramp regardless of the direction of swing of the door.

2. Platforms may be omitted for ramps 6 foot or less in length.

(b) Every landing or platform shall be at least as wide as the stairway or ramp, measured at right angles to the direction of travel. Every landing or platform must have a length of at least 3 feet, measured in the direction of travel.

(c) Spaces beneath stairs and ramps may not be enclosed for any use.

Note: The department intended to repeal (c) and follow the policy stated in (8).

(6) **CURVED STAIRS.** Interior or exterior curved stairs used as required exits shall meet all the requirements for stairways. Curved stairs shall have a radius of at least 25 feet at the interior edge of the tread.

(7) **SPIRAL STAIRS.** Spiral stairways may be permitted as specifically allowed by the occupancy chapters of this code. Such spiral stairs shall provide a clear walking area measuring at least 22 inches from the outer edge of the supporting column to the inner edge of the handrail and shall have treads at least 7 inches in width at a point one foot from the narrow end of the tread, and a uniform riser height of not more than 9½ inches.

(8) **SPACES BENEATH STAIRS AND RAMPS.** Spaces beneath the steps, stairs, ramps, landings and platforms which are within a vertical enclosure under s. ILHR 51.02 (11) may not be used for any other purpose, unless that space is separated from the enclosure by the same degree of fire resistive construction required for the enclosure.

(b) Spaces beneath steps, stairs, ramps, landings and platforms which provide a means of egress, but not enclosed under s. ILHR 51.02 (11), may not be used for any other purpose, unless;

1. The space is separated from steps, ramps, landings and platforms by at least one hour fire resistive construction; or

2. The space and the steps, ramps, landings and platforms are all contained within an individual living unit under the scope of ch. ILHR 57.

History: 1-2-56; am. (2); (2) (a); (2) (b); Register, June, 1956, No. 6, eff. 7-1-56; r. and recr. Register, September, 1959, No. 45, eff. 10-1-59; r. (4) (b), renum. (c) to be (b), and cr. (5), Register, February, 1971, No. 182, eff. 3-1-71; am. (2) (a), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr. Register, December, 1974, No. 228, eff. 1-1-75; am. (4) (a) and cr. (10), Register, December, 1977, No. 264, eff. 1-1-78; cr. (7) (a), Register, December, 1978, No. 276, eff. 1-1-79; r. (5) to (7), renum. (8) to (10) to be (5) to (7) and am. (7), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr. (1), am. (2), (3) (a) and (5), renum. (3) (b) to be (3) (b) 1. and am., cr. (3) (b) 2., (4) (f) and (g), Register, August, 1985, No. 356, eff. 1-1-86; renum. (3) (b) 1. to be (3) (b), r. (3) (b) 2., am. (4) (a) (intro.), (d) and (7), cr. (8), Register, February, 1991, No 423, eff. 4-1-91.

ILHR 51.161 Handrails. (1) **WHERE REQUIRED.** Handrails shall be provided in all of the following conditions unless otherwise specified in the occupancy chapters of this code.

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(a) On either side for all interior stairways of more than 3 risers and for all ramps overcoming a change in elevation of more than 24 inches.

(b) On the open side of any stairway with more than 3 risers and on the open side of any ramp overcoming a change in elevation of more than 24 inches.

(c) On both sides of interior stairways or ramps 5 feet or more in width.

(d) To divide interior stairways or ramps more than 8 feet wide into widths at least 3 feet 8 inches but less than 8 feet.

(e) On both sides of exterior stairways with more than 3 risers and on both sides of exterior ramps overcoming a change of elevation of more than 24 inches, either of which are an integral part of the building.

(f) To divide exterior stairways or ramps, either of which are an integral part of the building and more than 25 feet wide into approximately equal widths not less than 3 feet 8 inches but not greater than 25 feet.

(g) The requirements specified in pars. (a) to (f) do not apply to ramps having a slope less than 1:20.

Note: See s. ILHR 52.04 (7) (c) for handrail requirements for ramps used to provide barrier free access.

(h) On fire escapes as specified in s. ILHR 51.20 (8).

(2) **LOADING.** All handrails shall be designed and constructed to withstand a load of 200 pounds applied in any direction at any point.

(3) **HEIGHT.** Handrails, except those serving fire escapes, shall be not less than 30 inches nor more than 34 inches above the nosing of the treads on stairways or above the surface of ramps.

Note: See s. ILHR 51.20 (8) for handrail requirements for fire escapes.

(4) **CONTINUITY AND EXTENSIONS.** (a) Except as provided in par. (b), handrails shall be continuous for the full length of the stairway or ramp and one handrail shall extend at least 12 inches beyond the top and bottom riser or ramp end and shall not constitute a projecting hazard.

(b) 1. Handrails not required for barrier-free design construction on assembly seating facilities need not comply with the 12 inch extension requirement.

2. Handrails on stairs located within individual living units need not comply with the requirements of par. (a).

(5) **CLEARANCE.** Handrails shall provide a clearance of at least 1½ inches between the handrail and the wall to which it is fastened.

(6) **OPENINGS BELOW TOP RAIL.** (a) Handrails protecting the open sides of stairways and ramps shall have intermediate rails or an ornamental pattern designed to prevent the passage of an object with a diameter larger than 6 inches, except in adult detention or correctional facilities, factory or warehouse occupancies the clear distance between intermediate rails measured at right angles to the rails may not exceed 21 inches.

(b) Handrails protecting the open sides of stairways and ramps not subject to use by children (i.e., waste water treatment plants, foundries, tanneries and other industrial occupancies) shall be provided with an intermediate rail at mid height or equivalent.

(7) **HANDGRIP DIMENSIONS.** The handgrip portion of a handrail serving a stairway or ramp may not be less than 1¼ inches nor more than 2 inches in any horizontal cross sectional dimension or any other shape with a perimeter dimension of at least 4 inches but not greater than 6¼ inches and with the largest cross-sectional dimension not exceeding 2¼ inches.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80; am. (4), Register, December, 1981, No. 312, eff. 1-1-82; am. (1) (a) to (g), renum. (4) (b) to be (4) (b) 1., cr. (4) (b) 2., Register, August, 1985, No. 356, eff. 1-1-86; am. (1) (a), r. and rec. (6) (a), cr. (7), Register, February, 1991, No. 423, 4-1-91.

Register, March, 1992, No. 435

ILHR 51.162 Guardrails. (1) **WHERE REQUIRED.** Guardrails shall be provided in all of the following conditions unless otherwise specified in the occupancy chapters of this code:

(a) On the open side of elevated platforms, landings, walks, balconies and mezzanines which are more than 24 inches in height;

(b) On assembly seating facilities as specified in s. ILHR 62.77;

(c) On open parking structures as specified in s. ILHR 62.28 and as indicated in sub. (5); and

(d) On openings through floors and roofs.

(2) **EXEMPT LOCATIONS.** Guardrails need not be provided:

(a) On the loading side of loading docks;

(b) On the auditorium side of a stage or enclosed platform; and

(c) Around floor pits, openings or depressions for manufacturing areas and processing areas where guardrails would interfere with the operations or functions of the areas.

Note: Federal OSHA also prescribes requirements concerning the guarding of floor openings under 29 CFR 1910.

(3) **LOADING.** (a) Except as provided in par. (b), all guardrails shall be designed and constructed to withstand a load of at least 200 pounds applied in any direction at any point.

(b) All guardrails on assembly seating facilities shall be designed and constructed to withstand a vertical and horizontal load of 50 pounds per linear foot. Loads need not be applied simultaneously.

(4) **HEIGHT.** Guardrails shall not be less than 3 feet 6 inches in height.

(a) *Exception.* Guardrails within individual living units may be 36 inches in height.

(b) *Exception.* Guardrails on a balcony immediately in front of the first row of fixed seating and which are not at the end of an aisle may be 30 inches in height.

(5) **OPENINGS BELOW TOP RAIL.** (a) Guardrails protecting the open sides of elevated platforms, walks, balconies, and mezzanines shall have intermediate rails or an ornamental pattern designed to prevent the passage of an object with a diameter larger than 6 inches, except in adult detention or correctional facilities, factory or warehouse occupancies the clear distance between intermediate rails measured at right angles to the rails may not exceed 21 inches.

(b) Guardrails in areas not subject to use by children shall be provided with an intermediate rail at mid height or equivalent.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80; am. (1) (b), (3) and (4) (b), Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. (2) and (5) (a), Register, February, 1991, No. 423, eff. 4-1-91.

ILHR 51.164 Headroom. (1) **GENERAL.** Except as provided in sub. (2), every means of egress shall be provided with a headroom clearance of not less than 6 feet 8 inches. In stairways, the clearance shall be 7 feet 0

inches established by measuring vertically from the edge of the tread nosing to the ceiling or soffit above the tread nosing.

(2) **EXCEPTION.** The headroom clearance for public stairways in apartments and townhouses may be reduced to not less than 6 feet 8 inches.

Note: See s. ILHR 57.07 (3) for requirements pertaining to stairways within individual living units.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80; am. Register, December, 1983, No. 336, eff. 1-1-84.

FP ILHR 51.165 Stairway identification. All stairways serving 4 or more stories shall have each floor level or story identified on the stair side as to its name or number with a permanent sign having letters or characters at least 2 inches in height.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 51.166 Stairway discharge. Where a stairway from the level below the exit discharge and a stairway from an upper floor terminate at the same exit discharge level, an approved barrier shall be provided to prevent persons from continuing down one or more full floor levels below the exit discharge level unless the exit discharge level has a vision panel to the outside or is otherwise made readily apparent.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, October, 1982, No. 322, eff. 11-1-82.

FP ILHR 51.167 Exiting through areas of hazard. (1) **GENERAL.** Except as provided in subs. (2) and (3), exit access shall be so arranged that it will not be necessary to travel through any area of hazard in order to reach the exit.

Note: See ss. ILHR 54.14, 55.29, 56.15, 57.14, 58.24, 58.62, 59.21, 60.25, 60.37, 62.32 for additional requirements.

(2) **GARAGES.** (a) Occupancies within the scope of ch. ILHR 54 may exit through storage garages.

(b) Occupancies within the scope of ch. ILHR 54 may not exit through repair garages.

(c) Occupancies within the scope of chs. ILHR 55-62 may not exit through a storage or repair garage.

(3) **KITCHENS.** (a) Exiting through a kitchen within an individual living unit is permitted.

(b) Exiting through kitchens equipped with residential-type appliances in areas such as but not limited to employe lounges, activity rooms and similar areas is permitted provided the kitchen is not used for commercial purposes.

(c) Exiting through kitchens of restaurants and similar commercial operations or kitchens equipped with commercial-type appliances is prohibited.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, October, 1982, No. 322, eff. 11-1-82.

ILHR 51.17 Smokeproof stair tower. (1) A smokeproof stair tower shall be an enclosed stairway which is entirely cut off from the building and Register, March, 1992, No. 435

which is reached by means of open balconies or platforms. The stairways, landings, platforms and balconies shall be of noncombustible material throughout. The enclosing walls shall be of not less than 4-hour fire-resistive construction, and the floors and ceilings of not less than 2-hour fire-resistive construction as specified in s. ILHR 51.04.

(2) The doors leading from the buildings to the balconies and from the balconies to the stairways shall be fire-resistive doors, and all openings within 10 feet of any building shall be protected with fire-resistive windows for moderate fire exposure, or fire-resistive doors as specified in s. ILHR 51.047.

(3) Each balcony shall be open on at least one side, with a railing not less than 3'6" high on all open sides.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. (1) and (2), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) and (2) eff. 8-1-71 and exp. 1-1-72, and cr. (1) and (2) eff. 1-1-72, Register, July, 1971, No. 187; am. (2), Register, June, 1972, No. 198, eff. 7-1-72.

ILHR 51.18 Interior enclosed stairway. (1) **GENERAL.** An interior enclosed stairway shall be separated from other areas of the building by fire-resistive rated construction as specified in ss. ILHR 51.04 to 51.049 with the hourly ratings as specified in Table 51.03-A.

(2) **EXTENT OF ENCLOSURE.** (a) The enclosure shall include at each floor level a portion of the floor which will be at least as wide as the stairway.

(b) The enclosure shall provide uninterrupted passage from the uppermost floor to an outside door without leaving the enclosure.

(c) The enclosure shall also include any passageway, if provided, on the floor of exit discharge leading from the stairway to the exit discharge, so as to afford uninterrupted passage from the uppermost floor to the exit discharge, without leaving the enclosure.

(3) **OPENINGS IN THE ENCLOSURE.** Openings in the stairway enclosure shall be limited to exit doors serving public passageways or corridors or serving floors occupied by a single tenant.

Note: See ch. Ind 4 for additional requirements pertaining to the location of elevator equipment room access doors.

(4) **PROTECTION OF OPENINGS.** (a) All openings for doors shall be protected by fire-rated door assemblies as specified in s. ILHR 51.047.

(b) If windows are provided in the enclosure, the window openings shall be protected by fixed fire-rated window assemblies as specified in s. ILHR 51.048, except in outside walls.

History: 1-2-56; am. (1) and (3), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) and (3), eff. 8-1-71 and exp. 1-1-72, and cr. (1) and (3), eff. 1-1-72, Register, July, 1971; No. 187; r. and recr. (1), Register, June, 1972, No. 198, eff. 1-1-73; am. (3), Register, December, 1975, No. 240, eff. 1-1-76; am. (2), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr., Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 51.19 Horizontal exit. (1) **GENERAL.** A horizontal exit shall consist of one or more openings through an occupancy separation; a 2-hour fire-rated separation wall extending from the basement or lowest floor to the underside of the roof deck or of one or more bridges or balconies connecting 2 buildings or parts of buildings entirely separated by occupancy separations as described in s. ILHR 51.08.

ILHR 14

(2) **PROTECTION OF OPENINGS.** Openings used in connection with horizontal exits shall be protected by fire-resistive doors as specified in s. ILHR 51.047.

(a) Doors serving as required exits shall be standard exit doors and shall swing in the direction of exit travel. Where a horizontal exit serves spaces on both sides of the wall, there shall be adjacent doorways equipped with doors which swing in opposite directions.

1. *Exceptions.* a. The swing of the exit door may comply with the exceptions permitted in the occupancy chapters of this code.

(b) Approved illuminated exit signs shall be provided to indicate the horizontal exit.

(c) Such doors shall be kept unlocked, unobstructed, provided with a self-closing device and normally be kept closed.

1. *Exception.* Doors protecting openings used in connection with horizontal exits may be left opened if equipped with an automatic closing device actuated by smoke density or products of combustion other than heat.

Note: The department will accept detectors installed in accordance with the Standard on Automatic Fire Detectors, NFPA No. 72-E. See Table 51.25-17.

(3) **RAMP SLOPE.** Where there is a difference of elevation between connected areas, the difference shall be overcome by a ramp with a slope of not more than one foot in 8.

(4) **PROJECTION OF ADJACENT OPENINGS.** All doors and windows within 10 feet of any balcony or bridge shall be fire-resistive doors or fire-resistive windows as specified in ss. ILHR 51.047 and 51.048.

History: 1-2-56; am. (2) and (4), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (2) and (4) eff. 8-1-71 and exp. 1-1-72, and cr. (2) and (4) eff. 1-1-72, Register, July, 1971, No. 187; am. (4) Register, June, 1972, No. 198, eff. 7-1-72; am. (4), Register, December, 1975, No. 240, eff. 1-1-76; r. and recr. Register, December, 1978, No. 276, eff. 1-1-79; am. (1) and (3), r. (2) (a) 1. a., renum. (2) (a) 1. b. to (2) (a) 1. a., Register, January, 1980, No. 289, eff. 2-1-80.

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ILHR 51.20 Fire escapes. (1) **LOCATION.** Every fire escape shall be so located as to lead directly to a street, alley, or open court connected with a street.

(a) Every fire escape shall be placed against a blank wall if possible. If such a location is not possible then every wall opening which is less than 6 feet distant horizontally from any tread or platform of the fire escape shall be protected by a fire-resistive window for moderate fire exposure or by a fire-resistive door as specified in ss. ILHR 51.047 and 51.048.

(2) **EXITS TO FIRE ESCAPES.** Every fire escape shall be accessible from a public passageway or shall be directly accessible from each occupied room. Exits to fire escapes shall be standard exit doors as specified in s. ILHR 51.15, except that doors to "A" fire escapes may be not less than 2 feet 6 inches wide.

(3) **DESIGN AND FABRICATION.** Each part of every fire escape (except counterweights for balanced stairways) shall be designed and constructed to carry a live load of 100 pounds per square foot of horizontal area over the entire fire escape. Each part of every fire escape shall be designed and constructed in accordance with the requirements of s. ILHR 53.50, except that the unit stresses therein specified shall be re-

duced by one-fourth. The minimum sections and sizes specified below shall be increased whenever necessary so that under full load the allowable unit stresses will not be exceeded.

(a) No other material than wrought iron, soft steel or medium steel shall be used for any part of a fire escape, except for weights, separators and ornaments. No bar material less than $\frac{1}{4}$ inch thick shall be used in the construction of any fire escape, except for separators, ornaments, structural shapes over 3 inches and rigidly built up treads and platforms of approved design. In the fabrication of a fire escape, all connections or joints shall be made by riveting, bolting or welding in an approved manner. All bolts or rivets, except for ornamental work, shall be not less than $\frac{3}{8}$ inch in diameter.

(4) PLATFORMS. Each platform on an "A" fire escape shall be at least 28 inches wide; each platform on a "B" fire escape shall be at least 3 feet 4 inches wide. Such widths shall be the clear distance between stringers, measuring at the narrowest point. Each platform shall extend at least 4 inches beyond the jambs of exit opening. The above minimum widths and lengths shall be increased, wherever necessary, so that no exit door or window will, when open, block any part of the required width of the fire escape. Every platform shall consist of either,

(a) Flat bars on edge, not less than $1 \times \frac{1}{4}$ inch, but not less than $1\frac{1}{4} \times \frac{1}{4}$ inch where bolts and separators are used except that platforms and treads constructed of flat bars on edge may be made of material $\frac{3}{16}$ inch in thickness provided the material is galvanized after fabrication. Bars shall not be spaced more than $1\frac{1}{4}$ inches, center to center.

(b) $\frac{1}{2}$ inch or $\frac{3}{8}$ inch square bars with sharp edge up, not more than $1\frac{1}{2}$ inches, center to center.

(c) $\frac{3}{8}$ inch round bars, not more than $1\frac{1}{2}$ inches, center to center.

(d) Platform and treads may be solid if covered by a roof.

(e) The platform frame shall consist of not less than $2 \times \frac{3}{8}$ inch flat bars on edge or equivalent, provided the brackets are not more than 4 feet apart. If brackets are more than 4 feet apart, the frame shall be correspondingly stronger and stiffer. Every platform wider than 30 inches, if made of square or round bars, shall have a third frame bar through the center; if made of flat bars, the platform shall have separators and bolts through the center. Frame bars shall not project more than $\frac{1}{4}$ inch above platform bars, except around the outside of platform.

(f) There shall be a platform at each story above the first, and intermediate platforms if floors are more than 18 feet apart vertically.

(g) Platforms shall not be more than 8 inches below the door sill.

(5) BRACKETS. Brackets for a 28 inch or 30 inch platform, when spaced not more than 4 feet apart, shall be made of not less than $\frac{3}{8}$ inch square bars or $1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{4}$ inch angles; such bars or angles shall be larger if the platform is wider or if the brackets are farther apart. Each bracket shall be fastened at the top to the wall by a through bolt (at least $\frac{3}{8}$ inch diameter), nut, and washer (at least 4 inch diameter). The slope of the lower bracket bar shall be not less than 30° with the horizontal. The lower bar shall have a washer or shoulder to give sufficient bearing against the wall.

(a) The strength of the wall to which brackets are to be attached shall be carefully considered in determining the spacing, shape and inside connection of brackets, so that under full load the wall will not be unduly strained. Where it is necessary to install brackets adjacent to wall openings they shall be located at a suitable distance therefrom, or the wall shall be properly reinforced.

(6) STAIRWAYS. (a) Each stairway of an "A" fire escape shall be at least 24 inches wide between stringers; such stairway shall have a uniform rise of not more than 8 inches and a uniform run of not less than 8 inches.

(b) Each stairway of a "B" fire escape shall be at least 3 feet 4 inches wide between stringers; such stairway shall have a uniform rise of not more than 8 inches, and a uniform run of not less than 9 inches.

1. The rise is the vertical distance from the extreme edge of any step to the corresponding extreme edge of the next step. The run is the horizontal distance between the same points.

(c) Stairway stringers shall consist of either:

1. A 5 inch channel or larger.
2. Two angles 2 x 2 x ¼ inch or larger.
3. Two flat bars 2 x ¾ inch or larger.
4. One flat bar 6 x ¼ inch or larger.

5. If 2 angles or 2 flat bars are used, they shall be properly tied together by lattice bars, vertical as well as horizontal. If flat bars are used, every stairway of more than 10 risers shall have lateral bracing. The connection of stringers to platform, at top and bottom, shall be at least equal in strength to the stringers and shall safely carry the full live and dead loads. If stringers are carried by intermediate brackets, the stringers shall have a horizontal bearing on the brackets and shall be properly and securely connected thereto.

6. Treads shall consist of either flat or square bars, (not round), of the size and spacing specified for platforms. An "A" tread shall consist of at least 6 square bars, or 7 flat bars. A "B" tread shall consist of at least 7 square bars, or 8 flat bars. A "B" tread made of flat bars shall have separators and bolt through the center. A "B" tread made of square bars shall be trussed.

7. Treads and platforms may be solid if covered by a roof.

(7) BALANCED STAIRWAY. All "B" fire escapes, and all fire escapes on schools, theaters, assembly halls, hospitals, nursing homes, residential care institutions, group foster homes, and homes for the elderly either shall reach to the ground or shall have a balanced stairway reaching to the ground. "A" fire escapes which are not on schools, theaters, assembly halls, hospitals, nursing homes, residential care institutions, group foster homes and homes for the elderly may terminate in a platform at least 3 feet long, located not more than 10 feet above the ground and does not serve more than 8 persons.

(8) RAILINGS. A railing at least 42 inches in height measuring vertically from the floor of the platform, shall be provided on all open sides of platforms. Railings at least 36 inches in height, measuring vertically Register, March, 1992, No. 435

from the nose of the treads, shall be provided on the open sides of all stairways and on both sides of balanced stairways. Either a railing or a handrail fastened to the wall shall be provided on each side of all "B" fire escape stairways. Railings on fire escapes subject to use by children shall have intermediate rails or an ornamental pattern designed to prevent the passage of an object with a diameter larger than 9 inches. Railings on fire escapes not subject to use by children shall be provided with 2 uniformly spaced intermediate rails.

(a) Every railing shall have posts, not more than 5 feet apart made of not less than $1\frac{1}{2}$ x $1\frac{1}{2}$ x $\frac{1}{4}$ inch angles or tees, or $1\frac{1}{2}$ inch pipe; top rail not less than $1\frac{1}{4}$ x $1\frac{1}{4}$ x $\frac{1}{4}$ inch angle or equivalent; center rail not less than $1\frac{1}{4}$ x $5/16$ flat bar or equivalent. All connections shall be such as to make the railing stiff; 2 bolts ($\frac{3}{8}$ inch or larger) shall be used at the foot of each post wherever possible, or at least one $\frac{1}{2}$ inch bolt shall be used. Railing shall be continuous. No projections on the inside of the railing shall be permitted. Where a railing returns to the wall, it shall be fastened thereto with a through bolt (at least $\frac{3}{8}$ inch diameter), nut, and washer; or (in reinforced concrete) with an approved insert; or the railing shall be made equally secure with a diagonal brace extending at least 3 feet horizontally and 3 feet vertically.

(b) All outside railings which are more than 60 feet above grade shall be at least 6 feet high, measuring vertically from floor of platform or from nose of step. Such railings shall be of special design approved by the department, having not less than 4 longitudinal rails, and vertical lattice bars not more than 8 inches apart, and proper stiffening braces or brackets.

(9) LADDER TO ROOF. Every fire escape which extends higher than the second floor shall be provided with a ladder leading from the upper platform to the roof, unless the fire escape stairway leads to the roof. The ladder shall have stringers not less than $1\frac{1}{4}$ inch pipe, or not less than 2 x $\frac{3}{8}$ inch flat bars, at least 16 inches apart in the clear. The rungs shall be not less than $\frac{1}{2}$ inch square or $\frac{3}{4}$ inch round bars, 12 inches center to center. The stringers shall be securely tied together at intervals no greater than every fifth rung. The stringers of each ladder shall extend not less than $3\frac{1}{2}$ feet above the roof coping and return to within 2 feet of the roof, with the top rung of the ladder level with the coping.

(10) OTHER TYPES OF FIRE ESCAPES. Sliding or chute fire escapes may be used, upon the approval of the department of industry, labor and human relations, in place of "A" or "B" fire escapes. Every sliding fire escape shall be provided with a ladder constructed as in sub. (9), extending from 5 feet above grade, to 4 feet above the roof coping.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. (1) (a), Register, February, 1971, No. 182, eff. 7-1-71; am. (7), Register, February, 1971, No. 182, eff. 3-1-71; r. and rec. 51.20 (1) (a) eff. 8-1-71 and exp. 1-1-72 and cr. (1) (a) eff. 1-1-72, Register, July, 1971, No. 187; am. (1) (a), Register, June, 1972, No. 198, eff. 7-1-72; am. (3) (intro. par.), Register, December, 1974, No. 228, eff. 1-1-75; am. (1) (a), Register, December, 1975, No. 240, eff. 1-1-76; am. (8) (intro.), Register, January, 1980, No. 289, eff. 2-1-80; am. (8) (b), Register, December, 1981, No. 312, eff. 1-1-82; am. (9), Register, February, 1991, No. 423, eff. 4-1-91.

ILHR 54.02 Number and location of exits. (1) NUMBER OF EXITS. Every building and every floor level thereof shall have at least 2 exits.

(2) EXCEPTIONS. One exit will be permitted in the following conditions:

(a) Floor levels used entirely for storage in buildings 2 stories or less in height and not over 3,000 square feet gross area per floor.

(b) Interior balconies or mezzanine floors not over 3,000 square feet gross area used entirely for storage.

(c) Open interior balconies or open mezzanine floors not over 750 square feet gross area used for purposes other than nonoccupied storage.

(d) One-story office buildings, without a basement or mezzanine, having a gross floor area, per floor, of not more than 1,800 square feet. Only one office operation per floor level shall be permitted. The single exit from the first floor or ground floor(s) shall be an outside exit serving only that floor level.

(e) Retail establishments not over 750 square feet net area, provided there are 2 directions for exiting from the entrance door of the store.

(3) **OFFICE SUITE EXITING.** One exit will be permitted from office suites having a floor area of not more than 1,800 square feet net area, provided there are 2 directions for exiting from the entrance door of the suite.

(4) * **EXIT DISTANCE.** (a) Exits shall be distributed or located so that no part of any building within the scope of this chapter will be more than 150 feet distant from an exit.

(b) Where an approved automatic fire sprinkler system is provided throughout the building, an increase in exit distance to 200 feet will be permitted for mercantile buildings and an increase in exit distance to 300 feet will be permitted in all other buildings within the scope of this chapter, except high hazard buildings.

(c) Buildings having contents which are liable to burn with extreme rapidity or from which poisonous fumes may be liberated or explosions occur in case of fire, shall have exits provided so that the maximum distance to exit is limited to 75 feet.

Note: See s. A52.015 of Appendix A for further information relating to "high hazard" occupancies.

(d) All of the above distances shall be measured along public passageways and aisles.

Note: Also see s. ILHR 54.08 (1) for alternate exit distance provisions.

(5) **EXIT DISTRIBUTION.** Exits in all buildings of this classification shall be so located and distributed so as to afford the best possible egress.

History: 1-2-56; cr. (1) (c), Register, September, 1959, No. 45, eff. 10-1-59; am. (1) (b), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (b) eff. 8-1-71 and exp. 1-1-72, and cr. (1) (b) eff. 1-1-72, Register, July, 1971, No. 187; am. (1), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr. Register, December, 1978, No. 276, eff. 1-1-79; am. (4), Register, January, 1980, No. 289, eff. 2-1-80; am. (4), Register, December, 1981, No. 312, eff. 1-1-82; emerg. am. (4) (b), eff. 9-6-86; am. (4) (b), Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 54.03 Type of exits. (1) At least one-half of the exits required in accordance with s. ILHR 54.02 shall be stairways or standard exits to grade as specified in ss. ILHR 51.15-51.18. The other exits shall be either stairways, standard exits, or horizontal exits as specified in s. ILHR 51.19, or fire escapes as specified in s. ILHR 51.20. A fire escape will not

* See Appendix A for further explanatory material.

be accepted as a required exit for any building level more than 5 stories or 55 feet above grade. An outside wooden stairway may be used as an exit for a 2-story building.

(a) *Exception.* The width of required exit stairways serving unoccupied areas (i.e., storage areas, equipment mezzanines and similar areas) not exceeding 750 square feet may be reduced to 3 feet 0 inches.

(b) *Exception.* Less than 3 risers may be used to elevated work stations (such as pharmacy floors, computer floors and similar areas) or to altars, podiums and similar areas, not in a required exit passageway.

(c) *Exception.* A spiral stairway may be used as a nonrequired convenience stairway in addition to all other required exit stairways in places of employment.

(d) *Exception.* A rescue platform (exterior balcony) of combustible construction may be used as a required second exit for buildings of type 5, 6, 7 and 8 construction, provided the following conditions are satisfied:

1. The exit serves 8 or less people;
2. The exit platform is located not more than 10 feet above the adjacent exit discharge grade;
3. The platform area is at least 14 square feet, with a minimum dimension of 3 feet;
4. The platform is designed for 80 pounds per square foot live load plus dead load;
5. Railings are provided in accordance with the provisions of s. ILHR 51.162;
6. Platforms having solid floors are provided with a roof equal in area to that of the platform;
7. All wood used in the construction of the rescue platform shall be pressure treated wood satisfying the requirements of the applicable standards specified in s. ILHR 53.63 (6) unless the wood is inherently resistant to decay; and
8. The exit door to the platform is not less than 2 feet 6 inches in width.

(2) Every building which will accommodate more than 50 persons above the second story shall have at least 2 stairways.

(3) Wherever stairways are required under this classification, ramps with a slope not greater than one foot in 8 feet may be substituted. Ramps shall comply with all the requirements for stairways as to construction, enclosures, width, landing and lighting, and shall be surfaced with an approved non-slip material.

History: 1-2-56; am. (1), Register, December, 1974, No. 228, eff. 1-1-75; cr. (1) (a) to (d), eff. 1-1-78; am. (1) (b), Register, December, 1978, No. 276, eff. 1-1-79; am. (1) (d) 5. and (3), Register, January, 1980, No. 289, eff. 2-1-80; am. (1) (d) (intro.) 5. and 6., cr. (1) (d) 7., Register, December, 1983, No. 336, eff. 1-1-84; am. (1) (d) (intro.), 6. and 7., cr. (1) (d) 8., Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 54.04 Required exit width. (1) The total required exit width from a building level shall be in accordance with the requirements of ss. ILHR 51.15 (6) and 51.16 (3).

(2) Standard fire escapes (s. ILHR 51.20) may be substituted for stairways to the extent of not more than $\frac{1}{3}$ of the required total width, subject to the provision of s. ILHR 54.02.

(3) Horizontal exits in accordance with the requirements of s. ILHR 51.19 may provide up to one-half of the required exit width for any floor, subject to the provisions of s. ILHR 54.02.

History: 1-2-56; am. (1) (a) and (b) and (3) (a) and (b), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr. (1) and (3), r. (4), Register, December, 1974, No. 228, eff. 1-1-75.

ILHR 54.05 Capacity of buildings. (1) In calculating the aggregate width of exits, the capacity of the buildings shall be established as follows:

- (a) Stores, first floor and basement ----- 30 sq. ft. per person
- (b) Stores, second floor and above ----- 60 sq. ft. per person
- (c) Dining rooms, cafes, taverns, etc. ----- 10 sq. ft. per person
- (d) Places of seated assemblage ----- 7 sq. ft. per person
- (e) Warehouses ----- 300 sq. ft. per person
- (f) Factories and offices ----- 75 sq. ft. per person

(2) The above figures are based on the net area of each occupied space. Where dining rooms, cafes, dance halls and places of seated assemblage accommodate more than 100 persons, see s. ILHR 55.01.

(3) In other occupancies not specified above, the capacity shall be determined by the actual number of persons liable to be accommodated therein and no greater number of persons will be permitted therein.

ILHR 54.06 Exit doors. (1) **GENERAL.** Every door which serves as an exit from a building, public passageway or stairway shall be a standard exit door as specified in s. ILHR 51.15, except:

- (a) Exit doors serving 25 or fewer persons need not swing in the direction of egress;
- (b) Exit access doors serving 25 or fewer persons may be reduced in width to 2 feet 8 inches and may be a sliding or accordion-type door;
- (c) Rolling, sliding and overhead types of doors or gates may be used as standard exit doors for tenant spaces in malls provided:

1. The door or gate is equipped with exit hardware in accordance with s. ILHR 51.15 (3);

2. The door or gate is counterbalanced such that it can be opened by a force not exceeding 12 pounds, or, if the door or gate is electrically operated, the door is supplied by an emergency power source capable of opening the door or gate;

3. The door or gate is maintained in a fully opened position during the business hours of the tenant space;

4. A security device permitted by s. ILHR 51.15 (3) (e) 2. is not engaged when the tenant space is occupied; and

5. Manual, chain hoist operators for the doors or gates are not employed.

(2) **ILLUMINATED EXIT SIGNS.** Every exit door from each floor level, other than the principal entrance for the building, shall be marked with an exit sign as specified in s. ILHR 51.15 (5).

(3) **SECURITY GATES.** Exterior security gates shall be permitted to protect exterior exit doors in accordance with this subsection.

(a) A security gate may not be closed or locked when the building or portion of the building protected by the security gate is occupied.

(b) When the gate is locked in place the gate shall be visible from the exterior of the building.

(c) A security gate may not be locked over exit doors which serve more than one building occupancy or tenant space.

(d) The locking device for a security gate which requires the use of a key or a combination to open it shall be accessible from the exterior of the building.

(e) The building owner shall send to the local fire department and building inspection department a letter indicating that a security gate is to be installed and maintained in accordance with this section.

(f) The department or its authorized deputies shall have the authority to revoke the use of any security gate for any exterior exit door upon the violation of any one provision specified in pars. (a) to (e).

History: 1-2-56; am. (1), Register, December, 1978, No. 276, eff. 1-1-79; am. Register, January, 1980, No. 289, eff. 2-1-80; am. Register, December, 1983, No. 336, eff. 1-1-84; r. and rec. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 54.07 Exit access. (1) Where there is not direct access to an exit or exits from an area within a building, exit access corridors, passageways, or aisles shall be provided to lead to the exit or exits.

(2) (a) The width of a corridor, passageway or aisle which provides access to an exit shall be at least:

1. Three feet, if the corridor, passageway or aisle serves a space with an occupant load not greater than 25 persons; and

2. Three feet 8 inches, if the corridor, passageway or aisle serves a space with an occupant load greater than 25 persons.

(b) The width of a corridor, passageway or aisle which provides egress from an exit shall be at least as wide as the required width for the exit served, as determined under ss. ILHR 51.15 (6) and 51.16 (3).

(3) (a) The width of a corridor, passageway, or aisle which provides access to or egress from an exit shall be determined at the narrowest point produced by any projection or other similar object or obstruction.

(b) The required width of a corridor, passageway, or aisle which provides access to or egress from an exit as determined under this section shall be maintained clear and unobstructed at all times.

ILHR 14

Note: See s. ILHR 52.04 (9) for corridor widths to accommodate the physically disabled.

History: 1-2-56; am. Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. Register, March, 1991, No. 423, eff. 4-1-91.

FP ILHR 54.08 Enclosure of stairways and shafts. (1) (a) Except as provided in par. (b), all stairways including landings, ramps and shafts, shall be enclosed as specified in s. ILHR 51.02 (11).

(b) 1. The stairways or shafts connecting one floor level with another floor level immediately adjacent to it may be left unenclosed where the distance to an exit from the area served by the open stairway including the horizontal travel distance on the exit access stair, does not exceed 100 feet in buildings not completely protected by an approved automatic sprinkler system or 150 feet in buildings completely protected by an approved automatic sprinkler system; or

2. Any stairway or shaft connecting the second floor, first floor and basement or ground floor shall be separated at the first floor level or first adjacent basement or ground floor level with fire resistive construction as specified in Table 51.03-A or better in buildings 2 stories or less in height, and where the distance to an exit from the area served by the open stairway including the horizontal travel distance on the exit access stair, does not exceed 100 feet in buildings not completely protected by an approved automatic sprinkler system or 150 feet in buildings completely protected by an approved automatic sprinkler system.

(2) All doors opening into such enclosures shall be as specified in s. ILHR 51.047, and all windows shall be of wired glass and metal frames and sash.

Note: See ch. ILHR 18 for requirements governing the installation and operation of elevators.

History: 1-2-56; am. (1) (a), (b), (c), (d) and (2), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (a), (b), (c), (d) and (2) eff. 8-1-71 and exp. 1-1-72; cr. (1) (a), (b), (c), (d) and (2) eff. 1-1-72, Register, July, 1971, No. 187; r. and recr. (1), Register, June, 1972, No. 198, eff. 1-1-73; am. (3), Register, December, 1977, No. 264, eff. 1-1-78; r. (3), Register, December, 1978, No. 276, eff. 1-1-79; am. (1), Register, January, 1980, No. 289, eff. 2-1-80; am. (1), Register, October, 1982, No. 322, eff. 11-1-82; am. (1) (b), Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. (1) (b) 1., Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 55.06 Capacity. (1) The following table includes various types of occupancy within the scope of this section, together with the method to be used in determining the capacity.

(2) No greater number of persons than the number thus established shall be permitted in any theater or assembly hall.

Use or Occupancy	Basis of Capacity
(a) Arenas and field houses -----	4 sq. ft. per person. Use seated areas only.
(b) Assembly halls, with stage -----	7 sq. ft. per person.
(c) Banquet halls -----	10 sq. ft. per person.
(d) Churches (auditoriums) -----	7 sq. ft. per person.
(e) Churches (dining rooms) -----	10 sq. ft. per person.
(f) Dance halls -----	10 sq. ft. per person.
(g) Dining rooms -----	10 sq. ft. per person.
(h) Gymnasiums -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(i) Lecture halls -----	7 sq. ft. per person.
(j) Lodge halls -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(k) Skating rinks -----	45 sq. ft. per person.
(l) Theaters -----	7 sq. ft. per person.
(m) Theater lobbies -----	7 sq. ft. per person.

(3) The capacity of theaters and theater lobbies must be combined to determine the theater capacity.

(4) (a) Every theater or assembly hall having movable seats shall display a sign stating the maximum number of persons permitted by code.

1. The sign shall be placed in a conspicuous place at the main entrance to each theater or assembly hall.

2. The sign shall have the following wording: "Limit (Number) Persons." The maximum number of persons shall be determined by the capacity as permitted by sub. (2) and s. ILHR 55.12. The lettering shall be white on a dark background. The letters shall be not less than 1½ inches in height and the number shall be not less than 3 inches in height.

History: 1-2-56; cr. (4) (a), Register, July, 1966, No. 127, eff. 8-1-66; r. (2) (k), renum. (2) (l) (m) (n) to be (k) (l) and (m), Register, September, 1973, No. 213, eff. 10-1-73; am. (2) (k), Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 55.07 Number and location of exits. (1) (a) Except as provided in par. (b), every floor and balcony of a theater and assembly hall shall be provided with not less than 2 exits, placed as far apart as practicable and so located that if any exit is blocked, some other exit will still be available from every part.

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(b) A balcony accommodating not more than 30 persons in places of worship may be served by one exit.

(2) Where more than 600 persons are accommodated, there shall be at least 3 exits and where more than 1,000 persons are accommodated, there shall be at least 4 exits.

(3) Exits shall be distributed on all sides which adjoin streets, alleys or open courts.

History: 1-2-56; r. and recr. (1), Register, August, 1985, No. 356, eff. 1-1-86.

FP ILHR 55.08 Type of exits. (1) The required exits from any part of a theater or assembly hall shall be exit doorways, stairways or ramps.

(2) All exits to grade from a higher or lower level shall be stairways or approved ramps. In all theaters and in assembly halls having a capacity of more than 400 persons, where the exit rise is not more than 3 feet approved ramps shall be used. By approved ramp is meant an incline located inside the building and having a slope of not more than one foot of rise in 8 feet.

(3) Stairway exits shall be interior stairways, or smokeproof towers as specified in s. ILHR 51.17; except that "B" type fire escapes may be used as exits from balconies for not more than one-half the required exit width, if located against blank walls.

FP ILHR 55.09 Stairways. (1) Every stairway in a theater or assembly hall shall be enclosed as specified in s. ILHR 51.18 with the following exceptions:

(a) Monumental stairways from the main floor to the first balcony need not be enclosed provided the balcony is served by additional enclosed stairways as specified in ss. ILHR 51.02 (11) and 55.07.

(b) 1. In a place of worship, a monumental exit access stairway from the main floor to the first balcony having an occupant load of not more than 30 persons need not be enclosed.

2. In a place of worship, a monumental exit access stairway from the main floor to the first balcony having an occupant load of 31 to 100 persons need not be enclosed provided the balcony is served by an additional open stairway.

3. In a place of worship, stairways from the main floor to the first balcony having an occupant load greater than 100 persons shall be enclosed to the outside as specified in ss. ILHR 51.02 (11) and 51.18.

4. Stairways from the basement to the first floor of a single story place of worship need not be enclosed if they lead directly to the exits.

(2) Stairways and steps which have more than 3 risers shall have handrails on both sides.

(3) (a) Every stairway used by the public in a theater or assembly hall shall have a uniform rise of not more than 7½ inches and a uniform tread of not less than 10 inches, measuring from tread to tread and from riser to riser.

(b) Less than 3 risers may be used to elevated altars, podiums and similar areas in churches provided the elevated area is not part of a required exit passageway.

Note: See s. ILHR 51.16 for general stairway requirements.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61; r. and recr. Register, February, 1968, No. 146, eff. 3-1-68; am. (4), Register, February, 1971, No. 182, eff. 7-1-71; am. (2), Register, December, 1974, No. 228, eff. 1-1-75; am. (1) (intro.) and cr. (4) (a), Register, December, 1978, No. 276, eff. 1-1-79; am. (1) (a), Register, December, 1981, No. 312, eff. 1-1-Register, March, 1992, No. 435

82; r. and recr. (1) (b), Register, October, 1982, No. 322, eff. 11-1-82; r. (2), renum. (3) and (4) to be (2) and (3) and am. (3) Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 55.10 Exit doors and doorways. (1) Every required single exit doorway shall contain a standard exit door as specified in s. ILHR 51.15, except:

(a) No single door or leaf of a double door may be more than 3 feet 6 inches wide;

(b) No 2 doors may be hinged together; and

(c) Rolling, sliding and overhead types of doors or gates may be used as standard exit doors for tenant spaces in malls provided:

1. The door or gate is equipped with exit hardware in accordance with s. ILHR 51.15 (3);

2. The door or gate is counterbalanced such that it can be opened by a force not exceeding 12 pounds, or, if the door or gate is electrically operated, the door is supplied by an emergency power source capable of opening the door or gate;

3. The door or gate is maintained in a fully opened position during the business hours of the tenant space;

4. A security device permitted by s. ILHR 51.15 (3) (e) 2. is not engaged when the tenant space is occupied; and

5. Manual, chain hoist operators for the doors or gates are not employed.

(2) Sills at all exit doorways shall be level and flush with adjacent inside and outside floors and ramps. Where an aisle or passageway leads to an exit from either side of the exit doorway there shall be a level floor space at the doorway extending the width of the aisle and the doorway.

History: 1-2-56; am. (4), Register, August, 1985, No. 356, eff. 1-1-86; r. and recr. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 55.11 Exit lights. All required exits, except those in church auditoriums, shall be identified by an approved exit light. Directional exit lights shall be provided to direct occupants to the exits. Exit lights and directional exit lights shall be as specified in s. ILHR 51.15 (5). **FP**

History: 1-2-56; r. and recr. Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 55.12 Required exit width. (1) The total required exit width from a building level shall be in accordance with the requirements of ss. ILHR 51.15 (6) and 51.16(3). **FP**

(2) In theaters, the width of the front entrance shall be not less than 1/2 of the total required exit width.

History: 1-2-56; am. (1), Register, June, 1972, No. 198, eff. 1-1-73; am. (1), Register, December, 1974, No. 228, eff. 1-1-75.

ILHR 55.13 Seating. All chairs, seats and benches used for the purpose of assembly seating shall conform to the requirements of subch. V, Assembly Seating Facilities, of ch. ILHR 62.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61; r. (2), renum. (3) to (6) to be (2) to (5), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr., Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 14

FP ILHR 55.14 Width of aisles. (1) Aisles having seats on both sides shall not be less than 2 feet 10 inches wide at the beginning and shall increase in width toward the exits at the rate of $\frac{1}{4}$ inch per foot of run; or the aisle may have a uniform width not less than the average width of the foregoing calculation. No wall aisle shall be less than 3 feet wide and no other straight aisle shall be less than 3 feet 6 inches wide.

(2) There shall be a cross aisle leading to each required side exit. Cross aisles shall not be less than 6 feet 8 inches back to back of adjacent rows of seats.

FP ILHR 55.15 Lobbies and foyers. The width of lobbies and foyers shall be determined on the same basis as required for exits in s. ILHR 55.12, but shall in no case be less than 5 feet wide, and shall be so designed and apportioned as to prevent congestion and confusion. Lobbies and foyers which serve as means of egress shall be at least equal in combined width to the required width of the stairways, passageways, aisles or exit doorways leading to them.

ILHR 55.16 Inclines and aisle steps. (1) To overcome any difference in level between courts, corridors, lobbies, passageways or aisles required, or used, in egress from a theater or an assembly hall, approved ramps as specified in s. ILHR 55.08 shall be employed where the difference in elevation does not exceed 3 feet, except that this requirement need not apply to balconies.

(2) Steps in balcony aisles shall extend the full width of the aisle and shall have a uniform rise and run as specified in s. ILHR 55.09. No handrails will be required.

FP ILHR 55.17 Obstruction. (1) All lobbies, aisles, passageways and doorways shall be kept free from furniture, drapes, display equipment, merchandise, vending machines and other obstructions, and no person except an employe shall be allowed to stand in or occupy, any of the aisles, passageways, corridors or lobbies during any performance or public gathering. Except that patrons may be allowed to wait in a lobby or similar space if such use does not encroach upon the required clear width of the exits. Such waiting shall be restricted to areas separated from the required exit ways by fixed railings not less than 42 inches high. In entrance lobbies only, the exit space may be divided by railings not less than 36 inches high set up in the direction of travel in an approved manner for the regulation of ingress and egress.

(2) A booth or counter for the sale of package merchandise may be placed in the lobby or foyer of a theater where there is sufficient excess space so that the front of the booth or counter can be located not less than 5 feet back of the line marking the width of the lobby or foyer required for exit purposes.

FP ILHR 56.06 Exits. (1) **TOTAL NUMBER OF EXITS.** The total number of exits from each floor level and each building shall be determined on the basis of total aggregate exit width and distances to exit. Each building and each floor level shall be provided with at least 2 exits.

(2) **TYPE OF EXITS.** At least 2 exits from all floor levels shall lead directly to grade through standard exit doors, stairs, interior enclosed stairs, smokeproof stair towers, fire-rated exit corridors, passageways, or ramps. One-half of the remaining required exits may be horizontal exits or fire escapes. Fire escapes are prohibited as required exits in pre-school,

elementary, middle, and high schools. In no case will fire escapes be permitted above the second story.

(a) *Standard exit doors.* Standard exit doors shall be provided in accordance with the requirements of ss. ILHR 51.15 and 56.08.

(b) *Stairs.* Stairs shall conform to the requirements of ss. ILHR 51.16 to 51.166, except that the stairs shall have a uniform rise of not more than 7½ inches, measured from tread to tread, and a uniform tread of not less than 10 inches, measured from nosing to nosing of tread. Handrails shall be provided on both sides. No closets or rooms may be placed under a stairway or landing.

(c) *Interior enclosed stairs and smokeproof stair towers.* Interior enclosed stairs and smokeproof stair towers shall conform with ss. ILHR 51.18 and 51.17, respectively.

(d) *Fire-rated exit corridors.* All rated exit corridors required to satisfy limitations on exit distance shall be of not less than one-hour fire-resistive construction, unless the fire-resistive ratings indicated in Table 51.03-A for required exit corridor enclosures are more restrictive.

(e) *Exit ramps.* The minimum width of exit ramps shall be determined in accordance with the requirements of s. ILHR 56.07. The minimum width shall be not less than 3 feet 8 inches. Exit ramps, other than those required for the physically disabled, shall have a slope not exceeding 1:8. Ramp slopes exceeding 1:12 shall be provided with handrails. Ramps shall be provided with a slip-resistant finish. Ramps shall be provided from areas noted under sub. (3) (c) involving a change of elevation between floor levels or platforms not exceeding 3 feet.

(f) *Fire escapes.* Fire escapes shall be constructed in accordance with the requirements of s. ILHR 51.20.

(g) *Horizontal exits.* Horizontal exits shall be constructed in accordance with the requirements of s. ILHR 51.19 and shall be of at least 4-hour rated construction.

(3) LOCATION OF EXITS. (a) *Exit distance.* 1. Travel distance to an exterior exit door, a required fire-resistive rated exit corridor, interior enclosed stairs, smokeproof stair tower, horizontal exit, or fire escape, from any point in a building accessible to the public, shall not exceed 150 feet.

2. Where an approved automatic fire sprinkler system is provided throughout the building, an increase in exit distance to 200 feet will be permitted.

3. Building service areas, including pipe chases and tunnels, catwalks, ducts or similar spaces not accessible to the public, shall not exceed 300 feet from an exit.

(b) *Distribution of exits.* All exits shall be distributed to provide the best possible means of egress. The exits shall be located so that in case any exit is blocked at any point some other exit is accessible through public passageways at all times. Locked security gates and doors shall not be placed so as to block required exit passageways or create dead-end corridors.

(c) *Auditorium, gymnasium and field house exits.* This rule shall apply only to auditoriums, gymnasiums and field houses which have a capacity

exceeding 600 persons. One-half of the required exits shall discharge directly to a street, alley or open court connected with a street, unless a 2-hour rated exit corridor is provided, wide enough to accommodate one-half of the occupants, which extends from the interior wall of the auditorium, gymnasium or field house to an exterior exit. The remaining required exits shall discharge directly to the exterior or to a public passageway which permits 2 directions of travel to the exits at the exterior of the building. The exiting shall be direct and unobstructed.

(4) **CLASSROOM EXITS.** (a) *Exits serving 50 persons or less.* At least one exit shall be provided from all rooms serving a capacity of 50 persons or less. The exit shall discharge directly to the exterior of the building or to a public passageway which permits 2 directions of travel to the exterior.

(b) *Exits serving 51-100 persons.* At least 2 exits shall be provided from all rooms serving a capacity of 51-100 persons. One exit shall discharge directly to the exterior of the building or to a public passageway which permits 2 directions of travel to the exterior. One exit may discharge through an adjacent room provided a clear passageway is maintained from the connecting door to a required exit serving the adjacent room.

(c) *Exits serving more than 100 persons.* At least 2 exits shall be provided from all rooms serving a capacity of more than 100 persons. The exits shall discharge directly to grade or to a public passageway which permits 2 directions of travel to the exterior.

(5) **WIDTH OF EXITS.** The total required exit width shall be provided in accordance with the requirements of s. ILHR 56.07.

FP (6) **EXIT LIGHTS.** All required exits indicated in s. ILHR 56.06 (2), and exits from areas serving a capacity of more than 100 persons, shall be identified by an approved exit light. Directional exit lights shall be provided to direct occupants to an exit. Exit lights and directional exit lights shall be as specified in s. ILHR 51.15 (5).

History: 1-2-56; am. (1), cr. (1) (a), Register, September, 1959, No. 45, eff. 10-1-59; am. Register, January, 1961, No. 61, eff. 2-1-61; r. and recr. (1) (a), renum. (2) to be (3), (3) to be (4), (4) to be (5), (5) to be (6) and (6) to be (7), and cr. (2) and (8), Register, May, 1971, No. 185, eff. 6-1-71; r. and recr., Register, September, 1973, No. 213, eff. 10-1-73; am. (1) (a) 2., Register, December, 1974, No. 228, eff. 1-1-75, r. and recr. Register, December, 1975, No. 240, eff. 1-1-76; am. (2), intro. and cr. (2) (g), Register, December, 1976, No. 252, eff. 1-1-77; am. (6), Register, December, 1983, No. 336, eff. 1-1-84; emerg. am. (3) (a), eff. 9-6-86; am. (3) (a), Register, November, 1986, No. 371, eff. 12-1-86; am. (2) (b) and (c), Register, March, 1991, No. 423, ef. 4-1-91.

FP **ILHR 56.07 Required exit width.** (1) The total required exit width from a building level shall be in accordance with the requirements of ss. ILHR 51.15 (6) and 51.16 (3).

(2) The capacity of educational buildings or any individual story or section thereof for the purpose of determining exits shall be the maximum capacity designated on approved plans.

(a) The maximum capacity shall not exceed the requirements of par. (b).

(b) The maximum capacities of all rooms and spaces as listed below shall be determined on the basis of the minimum net square feet area per person shown for that occupancy unless otherwise designated on the plans.

Register, March, 1992, No. 435

	Minimum Square Feet Per Occupant
1. Academic classrooms — Regular -----	20
2. Administrative and office space -----	75
3. Arts, crafts, drafting -----	30
4. Bleachers (one seat per 18 inches of bench length)	
5. Gymnasiums, field houses, auditoriums, theatres, lecture rooms (fixed seating) -----	6
6. Gymnasiums, field houses, multipurpose rooms, cafeterias, study halls, commons and other level floor areas with nonfixed individual seating -----	10
7. Home economics, business education -----	30
8. Industrial arts-vocational shop -----	50
9. Laboratories-Science (fixed lab. tables) -----	30
10. Libraries and resource centers -----	20
11. Museums and art galleries-----	40
12. Music	
a. Vocal -----	10
b. Instrumental -----	20
13. Special education	
a. Mentally retarded, physically handicapped, etc. -----	35

History: 1-2-56; r. and recr. (3), Register, May, 1971, No. 185, eff. 6-1-71; am. (1), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr., Register, September, 1973, No. 213, eff. 10-1-73; r. and recr. (1), r. (2), (3) and (4), renun. (5) to be (2), Register, December, 1974, No. 228, eff. 1-1-75.

ILHR 56.08 Exit doors. (1) **STANDARD EXIT DOORS.** Exit doors shall comply with the requirements of s. ILHR 51.15. The aggregate width of exit doors shall be as required in s. ILHR 56.07. No single door or leaf of a double door shall be more than 42 inches wide.

(2) **CLASSROOM EXIT DOOR WIDTH AND SWING.** (a) *Classroom doors serving 50 persons or less.* Classroom doors serving classrooms with a capacity of 50 persons or less shall be not less than 3 feet 0 inches in width. The doors may swing into the classroom.

(b) *Classroom doors serving more than 50 persons.* Classroom doors serving classrooms with a capacity of more than 50 persons shall be standard exit doors and shall swing outward toward the means of egress.

(3) **ALL OTHER EXIT DOORS.** Doors serving areas other than classrooms shall comply with s. ILHR 54.06.

History: 1-2-56; r. and recr. Register, December, 1975, No. 240, eff. 1-1-76; am. (2) and cr. (3), Register, December, 1978, No. 276, eff. 1-1-79; am. (1) and (2) (b), r. (2) (c), Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 56.09 Passageways. (1) The minimum unobstructed width of corridors and passageways which are used by the public or by the occupants generally, shall be determined in the same manner as specified for stairways in s. ILHR 56.07, but in no case shall this width be less than 4 feet. Corridors and passageways serving as a means of egress shall be at least equal in combined width to the required width of the stairways or passageways leading to them.

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History: 1-2-56; r. (1) and renun. (2) to be (1), Register, May, 1971, No. 185, eff. 6-1-71.

ILHR 56.10 Enclosure of stairways and shafts. All stairways and shafts shall be enclosed in accordance with s. ILHR 51.02 (11).

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 56.13 Assembly seating. All assembly seating in auditoriums, gymnasiums, field houses and other large group occupancy areas shall

Register, March, 1992, No. 435

comply with the requirements of subch. V, Assembly Seating Facilities, of ch. ILHR 62. Where any area of a building in this category has a stage loft in excess of 25 feet 0 inches in height above the stage floor and is equipped with permanent or movable scenery, it shall comply with ss. ILHR 55.21 through 55.30.

History: 1-2-56; r. and recr., Register, May, 1971, No. 185, eff. 6-1-71; r. and recr., Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 56.14 Seats, desks and aisles. (1) Seats, desks, tables and other loose equipment need not be fastened to the floor or to each other provided that any seating arrangement use, will maintain during occupancy, free and unobstructed intermediate, cross and wall aisles leading to the exit.

(a) Stepped floors or tiered platforms shall be no less than 48 inches in width to permit the above arrangement.

(b) Seats, desks, tables and other loose equipment used in instructional occupancies shall be of a durable type of construction to assure safety and stability.

History: 1-2-56; r. and recr., Register, May, 1971, No. 185, eff. 6-1-71.

ILHR 57.03 Number and location of exits. (1) **NUMBER OF EXITS.** (a) Except as provided in par. (b), all living units shall have exits or exit accesses in accordance with one of the following:

1. The unit shall have at least one exit access door into a common area of the building arranged such that there are 2 directions of travel from the unit's exit access door leading to separate exits;

2. The unit shall be provided with 2 separate exits contained within the unit;

3. The unit shall be provided with 2 exit access doors into separate common areas, with each common area provided with at least one exit; or

4. The unit shall be provided with an exit access door into a common area with at least one exit, in addition to an exit contained within the unit.

(b) Units with habitable rooms on a floor of exit discharge may be provided with at least one exit, directly from the unit to the exterior, with the unit exit door sill at or within 3 feet of grade at the exit door.

(c) A minimum of 2 exits or exit access doors shall be provided from any living unit which accommodates more than 8 people.

(2) **EXIT DISTRIBUTION.** The number and location of exits shall be such that in case any exit or passageway is blocked at any point, some other exit will still be accessible through public passageways from every living unit.

(3) **DISTANCE TO EXIT.** (a) 1. Exits shall be distributed so that the entrance to each living unit will be not more than 100 feet distant from an exit, measuring along public passageways.

Note: Also see s. ILHR 57.08 (2).

Register, March, 1992, No. 435

2. Where automatic fire sprinkler system protection as specified in option 2 of s. ILHR 57.016 (1) (b) is provided an increase in exit distance to 150 feet will be permitted.

(b) The exit distances required by this section shall be measured to exits to grade, to doors leading to stairway enclosures as specified in ss. ILHR 51.165, 51.17 and 51.18, or to horizontal exits as specified in s. ILHR 51.19.

(4) **EXITS FOR NONRESIDENTIAL PORTIONS OF BUILDINGS.** Exits serving portions of buildings without sleeping rooms or living units (i.e., basements of apartment buildings, hotel lobbies, and similar areas) shall be provided in accordance with the appropriate occupancy chapter, chs. ILHR 54 to 62, which may govern.

(5) **DIRECTIONS FOR ESCAPE.** An exiting diagram shall be conspicuously posted in every habitable room to be used by transients, including but not limited to those habitable rooms of hotels, motels, rooming houses and dormitories. The exit diagram shall depict the location of the room with respect to other rooms and at least 2 exits.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (1), Register, August, 1986, No. 356, eff. 1-1-86; emerg. renum. (2) (a) to be (2) (a) 1., cr. (2) (a) 2., eff. 9-6-86; renum. (2) (a) to be (2) (a) 1., cr. (2) (a) 2., Register, November, 1986, No. 371, eff. 12-1-86; r. and rec. (1) (a) and (b) and (5), renum. (2) to (5) to be (3), (2), (5), and (4) respectively, am. (4), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 57.04 Capacity of buildings and exits. (1) BUILDINGS. (a) *Sleeping areas.* The capacity of the habitable rooms of the living units of the building, other than a community-based residential facility, shall be established as follows:

1. 400 cubic feet for each occupant over 12 years of age; and
2. 200 cubic feet for each occupant 12 years of age or under.

(b) *Minimum size.* The size of habitable rooms shall provide the minimum volumes specified in par. (a).

(c) *Nonsleeping areas.* The capacity of the areas not within the living units of the building shall be established as specified in s. ILHR 54.05 or 55.06.

(d) *Overcrowding.* The number of occupants permitted in any room or in the building shall not exceed the capacities specified in this section.

(2) **COMMUNITY-BASED RESIDENTIAL FACILITIES. (a) *Facilities serving 9 to 20 residents.*** The minimum size of resident bedrooms in community-based residential facilities serving 9 to 20 residents shall be as follows:

1. Sixty square feet of habitable floor space per ambulatory resident;
2. Eighty square feet of habitable floor space per semiambulatory or nonambulatory resident in multiple bed sleeping rooms; and
3. One hundred square feet of habitable floor space per semiambulatory or nonambulatory resident in single bed sleeping room.

(b) *Facilities serving more than 20 residents.* The minimum size of resident bedrooms in community-based residential facilities serving more than 20 residents shall be as follows:

ILHR 14

1. Eighty square feet of habitable floor space per ambulatory resident;
2. Eighty square feet of habitable floor space per semiambulatory and nonambulatory resident in multiple bed sleeping rooms; and
3. One hundred square feet of habitable floor space per semiambulatory and nonambulatory resident in single bed sleeping rooms.

(c) *Nonsleeping rooms.* In addition to the floor areas required under pars. (a) and (b), a community-based residential facility shall provide habitable floor space, other than sleeping rooms of not less than:

1. Sixty square feet in area for each ambulatory resident;
2. Ninety square feet in area for each semiambulatory resident; and
3. Ninety square feet in area for each nonambulatory resident.

(3) **EXITS.** The total required exit width from each level of the building shall be as specified in ss. ILHR 51.15 (6) and 51.16 (3).

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (2) (c), Register, March, 1991, No. 423, eff. 4-1-91.

FP ILHR 57.05 Type of exits. (1) **GENERAL.** Except as provided in sub. (2), at least one-half of the required exits, accessible from each living unit, shall be exits to grade or stairways as specified in ss. ILHR 51.15 and 51.16. The remaining exits shall be either stairways, interior enclosed stairways, exits to grade or horizontal exits. Fire escapes placed against blank walls may be used as exits from floors which are not more than 40 feet above grade.

(2) **EXCEPTIONS.** (a) Every building which accommodates more than one family, or 8 persons, above the second story shall have at least 2 stairways.

(b) A rescue platform of combustible construction may be used as a required second exit for buildings of type 5 through type 8 construction, provided the following conditions are satisfied:

1. The exit serves a single living unit;
2. The exit platform is located not more than 10 feet above the adjacent exit discharge grade;
3. The platform area is at least 14 square feet, with a minimum dimension of 3 feet;
4. The platform is designed for 80 pounds per square foot live load plus dead load;
5. Railings are provided as specified in s. ILHR 51.162;
6. Platforms having solid floors are provided with a roof equal in area to that of the platform;
7. All wood used in the construction of the rescue platform shall be pressure treated wood satisfying the requirements of the applicable standards specified in s. ILHR 53.63 (6) unless the wood is inherently resistant to decay; and

8. The building is not a residential care facility, group foster home or home for the elderly.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (b) (intro.) and 6., renum. (2) (b) 7. to be (2) (b) 8., cr. (2) (b) 7., Register, December, 1983, No. 336, eff. 1-1-84; am. (2) (b) (intro.) and 7., Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 57.06 Doors. (1) **EXIT DOORS.** Exit doors shall be as specified in s. ILHR 51.15, except:

(a) Sliding glazed patio-type doors may serve as the second exit from individual living units, provided there is a means to prevent accumulation of snow and ice in the door track or freezing of the door; and

(b) A door which is used by not more than 25 persons is not required to swing in the direction of egress.

(2) **OPENINGS INTO CORRIDORS.** All doors from living units opening into public exit access corridors shall be protected by at least 20-minute labeled fire-door assemblies. Such doors shall be self-closing.

(3) **ACCESS DOORS.** Exit access doors from individual living units shall be at least 3 feet 0 inches in width.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. (1), am. (2), cr. (3), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 57.07 Steps, stairs and shafts. (1) **EXTERIOR STAIRS.** Exterior stairs shall be as specified in s. ILHR 51.16, except that less than 3 steps may be provided between exterior platforms and grade serving only apartments, row houses and town houses, and the platforms or treads between such risers do not exceed 5 feet 0 inches in length in the direction of travel.

(2) **INTERIOR STAIRS.** Interior stairs used by not more than 25 persons shall be not less than 3 feet wide.

(3) **CHANGES OF ELEVATION WITHIN INDIVIDUAL LIVING UNITS.** (a) Changes of elevation within the living unit shall be overcome by means of steps, stairs or ramps and shall be as specified in s. ILHR 21.04, except a spiral stairway as specified in s. ILHR 51.16 (7) may serve as the only exit from floor levels within an individual living unit, if the floor level served is no larger than 400 square feet in net area.

Note: See appendix for a reprint of s. ILHR 21.04.

(b) A spiral stairway as specified in s. ILHR 51.16 (7) may serve as the only exit from floor levels within an individual living unit, if the floor level served is no larger than 400 square feet.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. (3), Register, August, 1985, No. 356, eff. 1-1-86; r. and recr. (3) (a), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 57.08 Enclosure of interior stairways and shafts. (1) **APPLICATION.** Except as provided in sub. (2), all stairways, including landings, ramps and shafts, shall be enclosed as specified in s. ILHR 51.02 (11) with fire-resistive rated construction as specified in Table 51.03-A.

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(2) **EXCEPTIONS.** (a) The exit access stairway or shaft connecting the first and second floor in residential buildings 2 stories or less in height may be left open in the following applications providing the conditions specified in par. (b) are satisfied:

1. Buildings having not more than 4 individual living units per floor each of which is served by 2 or more means of egress; or

2. A building which is used as a rooming house, dormitory or congregate living facility and which has a maximum occupancy limit of 16 persons per floor.

(b) 1. Every exit access stairway or shaft to the basement or ground floor is cut off at the first floor or first adjacent basement or ground floor level with fire resistive construction as specified in Table 51.03-A or better; and

2. The distance to an exit, including the horizontal travel distance on the exit stair, does not exceed 50 feet in buildings not completely protected with an automatic fire sprinkler system or 75 feet in buildings completely protected as specified in s. ILHR 57.016 (1) (b).

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, October, 1982, No. 322, eff. 11-1-82; emerg. am. (2) (b) 2., eff. 9-6-86; am. (2) (b) 2., Register, November, 1986, No. 371, eff. 12-1-86; r. and recr. (2) (a) 2., Register, March, 1991, No. 423, eff. 4-1-91.

FP ILHR 57.09 Passageways. (1) **WHERE REQUIRED.** Where there is not direct access to outside exit doors, safe and continuous passageways, aisles or corridors leading directly to every exit shall be maintained at all times on all floors of all buildings.

(2) **MINIMUM WIDTH.** Every public passageway leading from an exit shall be at least as wide as the required width of the exit as specified in s. ILHR 51.15 (6), but in no case shall the width be less than 3 feet.

(3) **WIDTH DETERMINATION.** Widths shall be measured in the clear, at their narrowest points produced by any projection, radiator, pipe or other object.

(4) **MAINTENANCE.** The required width shall be kept clear and unobstructed at all times.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 57.10 Illumination of exits and exit signs. (1) **ILLUMINATION.** (a) Buildings having more than 4 living units or accommodating more than 30 persons or accommodating transients shall have public passageways, stairways and exit doors illuminated from one hour after sunset to one hour before sunrise.

(b) The illumination requirements specified in par. (a) shall be provided at all intersections or passageways, at all exits and at the head, foot and landing of every stairway.

(2) **EXIT LIGHTS.** (a) Except as provided in par. (b), every required exit, from each floor shall be indicated by an approved illuminated, exit sign.

(b) 1. Exits within an individual living unit need not be provided with exit signs.

2. Exits in buildings having 4 living units or less per floor need not be provided with exit signs if the building contains not more than 8 living units and the path of exit from all floor levels including the basement to the outside is readily apparent.

(c) Exit lights shall be as specified in s. ILHR 15.15 (5).

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2), Register, December, 1983, No. 336, eff. 1-1-84.

Health Care Facilities

ILHR 58.04 Required means of egress. (1) **GENERAL.** All required means of egress shall comply with the requirements as specified in s. ILHR 51.15, except as modified in this section. **FP**

(2) **EXIT DOORS.** (a) *Width.* All exit doors shall be not less than 44 inches and not more than 48 inches in width, except that doors serving enclosed stairways may be a minimum of 36 inches in width.

(b) *Door swing.* A door which is used by 25 persons or less shall not be required to open in the direction of egress.

(c) *Force to open door.* The force required to fully open doors shall not exceed 37 pounds applied to the latch side.

(d) *Door platforms.* The floor on both sides of an exit door, except as specified in s. ILHR 51.16 (4) (c), shall be at the same elevation and be level for a distance at least the width of the door, or as specified in s. ILHR 52.04 (9) (b).

(3) **EXIT ACCESS DOORS.** (a) *Width.* 1. All exit access doors from hospital and nursing home sleeping rooms; patient or resident use areas; diagnostic and treatment areas, such as x-ray, surgery, or physical therapy; and all doors between these spaces and the required exits shall be at least 44 inches wide.

2. Exit access doors not subject to use by patients, shall be at least 36 inches wide.

(b) *Door swing.* A door which is used by not more than 25 persons shall not be required to open in the direction of egress.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (b), Register, October, 1982, No. 322, eff. 11-1-82.

ILHR 58.05 Number and type of exits. (1) **NUMBER.** At least 2 exits, located remote from each other, shall be provided from each floor and fire section of the building. **FP**

(2) **TYPE OF EXITS.** (a) At least one exit from each floor or smoke compartment shall be by a door leading directly to a stairway, smokeproof tower, ramp, horizontal exit, exit passageway, or to the outside the building as specified in this subchapter.

(b) No more than one-half of the required exits shall be horizontal exits.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.06 Stairs. (1) **STAIR DETAILS.** All stairs shall comply with the requirements specified in ss. ILHR 51.16 and 51.164, except as modified in this section. **FP**

(a) All stairways and steps shall have a rise of not more than 7 inches and not less than 4 inches and a tread not less than 11 inches, measured from tread to tread and from riser to riser. Treads and risers shall be

uniform in any one flight. Winders shall not be used. Treads shall be solid.

(b) Every landing or platform shall be at least as wide as the stairway, measured at right angles to the direction of travel. The length of every landing or platform shall be at least as wide as the stairway. The length of the landing or platform need not exceed 48 inches.

(c) The aggregate width for stairways shall comply with the requirements specified in s. ILHR 58.12.

(2) ENCLOSURE. (a) All stairways shall be enclosed as specified in s. ILHR 51.18.

(b) Stairways in addition to those required by these rules, need not lead to the outside, but shall comply with the enclosure requirements.

(c) Non-required exit stairways and ramps connecting different levels within the same floor as defined in s. ILHR 51.02 (56a) are not required to be enclosed.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (1) (a) and (2) (a), Register, October, 1982, No. 322, eff. 11-1-82; r. and recr. (1) (a), Register, December, 1983, No. 336, eff. 1-1-84; cr. (2) (c), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.07 Handrails. Handrails shall be provided as specified in s. ILHR 51.161, except that handrails protecting the open sides of stairways and ramps shall have intermediate rails or an ornamental pattern designed to prevent the passage of an object with a diameter larger than 6 inches.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.08 Guardrails. Guardrails shall be provided as specified in s. ILHR 51.162, except that guardrails shall have intermediate rails or an ornamental pattern designed to prevent the passage of an object with a diameter larger than 6 inches.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.09 Smokeproof towers. Smokeproof stair towers shall comply with the requirements specified in ss. ILHR 51.17, 58.04 and 58.06.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.10 Horizontal exits. (1) GENERAL. Horizontal exits shall comply with the requirements specified in s. ILHR 51.19, except as modified in this section.

(2) AREA. At least 30 net square feet per occupant in a facility shall be provided within areas such as corridors, patient rooms, treatment rooms, lounge or dining areas on each side of the horizontal exit for the total number of people in the adjoining compartment.

(3) DOORS. (a) A single door used as a horizontal exit shall serve one direction only, be at least 44 inches wide, swing in the direction of egress and comply with the requirements specified in s. ILHR 58.21.

(b) A horizontal exit in a corridor 8 feet or more in width serving as a means of egress from both sides of the doorway shall have the opening protected by a pair of swinging doors, arranged to swing in the opposite direction from the other, with each door being at least 44 inches wide.

(c) Center mullions are prohibited.

(d) A vision panel, complying with the requirements specified in s. ILHR 51.048 and not exceeding 100 square inches, shall be provided in each horizontal exit door. Vision panels shall be set in steel frames and shall be tested as part of the entire rated door assembly.

(4) RESTRICTIONS. If a horizontal exit is used as a smoke barrier it shall comply with the requirements specified in s. ILHR 58.30.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2), Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 58.11 Ramps. (1) **MINIMUM WIDTH.** (a) *Interior ramps.* Interior ramps shall be a minimum of 44 inches wide, of which not more than 4 inches on each side may be occupied by a handrail.

(b) *Exterior ramps.* Exterior ramps shall be a minimum of 48 inches wide of which not more than 4 inches on each side may be occupied by a handrail.

(2) **SLOPE.** Ramps shall have a slope of not more than 1 foot of rise in 12 feet of run.

(3) **ENCLOSURE.** Ramps used as a required means of egress and that connect different floors shall comply with the enclosure requirements for stairways specified in s. ILHR 58.06 (2).

(4) **LANDINGS AND PLATFORMS.** (a) If a door is provided at the top or bottom or both of a ramp, a landing or platform shall be placed between the door and the ramp regardless of the direction of swing of the door.

(b) Every landing or platform shall be at least as wide as the ramp, measured at right angles to the direction of travel. The length of every landing or platform shall be at least as wide as the ramp, but need not exceed 48 inches.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (4), Register, December, 1983, No. 336, eff. 1-1-84; am. (3), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.12 Capacity of means of egress. (1) **OCCUPANT LOAD.** (a) *Capacity.* The occupant load for which means of egress shall be provided for any floor shall be the maximum number of persons to occupy that floor, but not less than one person for each 120 square feet gross floor area.

(b) *Exits serving more than one floor.* Where exits serve more than one floor, only the occupant load of each floor considered individually need to be used in computing the capacity of the exits at that floor, provided the exit capacity is not decreased in the direction of exit travel.

(2) **REQUIRED EXIT WIDTH.** (a) *Units of exit width.* The required exit width shall be measured in units of exit width of 22 inches. Fractions of a unit less than 12 inches shall not be counted. Fractions of a unit 12 inches or more, added to one or more full units, shall be counted as 1/2 unit of exit width.

(b) *Clear width.* The clear width of the means of egress shall be measured at the narrowest point of the exit component under consideration, except as provided below:

1. The exit width for doorways shall be the measured width of each door leaf;

2. A handrail may project inside the measured width on each side not more than 4 inches; or

3. A stringer may project inside the measured width on each side not more than 1½ inches.

(3) **CAPACITY PER UNIT OF EXIT WIDTH.** (a) *Stairways.* The capacity of means of egress providing travel by means of stairs shall be 22 persons per exit unit, except that in buildings protected with a complete automatic sprinkler system the capacity shall not exceed 35 persons per exit unit.

(b) *Horizontal travel.* The capacity of means of egress providing horizontal travel, such as doors, ramps, or horizontal exits shall be 30 persons per exit unit, except that in buildings protected with a complete automatic sprinkler system the capacity shall not exceed 45 persons per exit unit.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.13 Arrangement of means of egress. (1) **PATIENT SLEEPING ROOMS.** Every patient sleeping room shall have an exit access door leading directly to an exit access corridor, except as provided below:

(a) If there is an exit door opening directly to the outside from the room at ground level; or

(b) One adjacent room, such as a sitting room or anteroom, may intervene, if all doors along the means of egress are equipped with nonlockable hardware, except as specified in s. ILHR 51.15 (3), and if the intervening room is not used to serve as an exit access for more than 8 patient sleeping beds.

(2) **CORRIDORS.** Every aisle, corridor and hallway shall provide access to at least 2 exits complying with the requirements specified in s. ILHR 58.05.

(a) *Dead end corridor.* Every exit or exit access shall be so arranged that no corridor, aisle or passageway has a pocket or dead end exceeding 30 feet.

(b) *Exit access corridors.* 1. Every aisle, corridor and hallway used for exit access shall be at least 8 feet in clear and unobstructed width of which not more than 4 inches on each side may be occupied by a handrail.

2. Where doors are placed in the exit access corridor, they shall be a pair of doors, each at least 44 inches in width. Where the exit access corridor serves as a means of egress from both sides of the doorway, the doors shall be arranged to swing in the opposite direction from the other.

(c) *Areas not intended for patient use.* Aisles, corridors and hallways in areas not intended for the housing, treatment or use of patients shall be at least 44 inches in clear and unobstructed width.

(3) **SUITE EXITING.** Any room, suite of rooms, space or area more than 1,000 square feet in area, shall have at least 2 exit access doors remote from each other.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (a), Register, December, 1983, No. 336, eff. 1-1-84; renum. (2) (a) and (b) to be (2) (b) and (c), cr. (2) (a), r. (3), renum. (4) to be (3), Register, August, 1985, No. 356, eff. 1-1-86.

Register, March, 1992, No. 435

ILHR 58.14 Measurement of travel distance to exits. All exits of health care facilities shall be located to provide remote means of egress.

(1) **EXIT ACCESS TO AN EXIT.** Travel distance measured along passageways between any room door required as an exit access and an exit shall not exceed 100 feet, except that in buildings protected with a complete automatic sprinkler system the distance shall not exceed 150 feet.

(2) **ROOM TO AN EXIT.** Travel distance measured along passageways between any point in a room and an exit shall not exceed 150 feet, except that in buildings protected with a complete automatic sprinkler system the distance shall not exceed 200 feet.

(3) **SLEEPING ROOM TO AN EXIT ACCESS.** Travel distance measured along passageways between any point in a health care sleeping room or suite and an exit access door to that room or suite shall not exceed 50 feet.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.15 Discharge from exits. All required ramps or stairs serving as exits shall discharge directly to the outside at grade or be arranged to travel through an exit passageway discharging to the outside at grade. Unenclosed exterior ramps or stairways may not be used as required exits as specified in s. ILHR 58.04.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.16 Illumination of means of egress. (1) **ILLUMINATION.** Artificial lighting shall be provided at all exits and for such period of times as required to maintain safe exiting.

(2) **ILLUMINATION LEVEL.** The floors of means of egress shall be illuminated at all points including angles and intersections of corridors and passageways, stairways, landings of stairs and exit doors to the values specified in ch. Ind 19.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.17 Emergency lighting. Emergency lighting shall comply with the requirements specified in ch. ILHR 16.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.18 Marking of means of egress. (1) **EXIT SIGNS.** Every required exit shall be identified with an internal illuminated, red exit sign bearing the word "EXIT" or "OUT" in plain letters not less than 6 inches high, with the principal strokes of letters not less than 3/4 inches.

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(2) **DIRECTIONAL SIGNS.** An illuminated sign, not less than 6 inches high, reading "EXIT" or similar designation, with an arrow indicating the direction, shall be placed in every location where the direction of travel to reach the nearest exit is not immediately apparent.

(3) **OBSTRUCTIONS.** (a) Decorations, furnishings or equipment which impair visibility of an exit sign shall not be permitted. Displays, objects in or near the line of vision to the required exit sign or brightly illuminated signs used for purposes other than exits shall not be permitted so as to detract attention from the exit sign.

(b) Hangings or draperies shall not be placed over exit doors or be located as to conceal or obscure any exit. Mirrors shall not be placed on exit doors. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of exit.

(4) SPECIAL SIGNS. Any door, passage, or stairway which is neither an exit nor a way of exit access, and which is located or arranged that it may be mistaken for an exit, shall be identified by a sign indicating it is not an exit.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.19 Headroom. Every means of egress shall be provided with a ceiling clearance of not less than 7 feet 6 inches.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 58.20 Key locking hardware. Key locking hardware on exit doors and exit access doors is prohibited except in areas accommodating residents who must be detained for their protection and the protection of the general public and the building complies with the requirements of ch. ILHR 58, subchs. I and II. Where the requirements of the 2 subchapters differ, the additional or more stringent requirement shall govern.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. Register, December, 1983, No. 336, eff. 1-1-84.

Detention and Correctional Facilities

FP ILHR 58.48 Required means of egress. (1) GENERAL REQUIREMENTS. All required means of egress doors shall comply with s. ILHR 51.15, except as modified in this section and s. ILHR 58.59.

(2) DOORS IN MEANS OF EGRESS. (a) Doors in a means of egress may be of the horizontal sliding type, providing the force to slide the door to its fully open position does not exceed 37 pounds.

(b) A door which serves an area with a capacity not more than 25 persons is not required to open in the direction of egress.

(3) EXIT DISCHARGE. Exit discharge may terminate at one of the following:

(a) Directly at the exterior of the building;

(b) At a horizontal exit; or

(c) Into a fenced or walled court, provided that not more than 2 walls of the court are the walls of the building from which exit is being made. Enclosed yards or courts shall be sized to accommodate all occupants, a minimum of 30 feet from the building with a net area of 15 square feet per person. Access from the fenced or walled court to the public thoroughfare may be fenced and locked.

(4) EXIT ACCESS. A dayroom may serve as a portion of the exit access from a sleeping room.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 58.49 Exit doors, number and type of exits. (1) NUMBER. At least 2 exits shall be accessible from each floor of the building and shall be located such that in case any exit is blocked, some other exit will still be accessible.

Register, March, 1992, No. 435

- (2) **EXIT DOORS.** All exit doors shall be at least 36 inches in width.
- (3) **EXIT ACCESS DOORS.** All exit access doors shall be at least 36 inches in width, except for the following modifications:
- (a) Doors to sleeping rooms shall be at least 28 inches in width;
- (b) Doors to sleeping rooms designated for use by the physically disabled shall be at least 32 inches in width; or
- (c) Doors to dayrooms shall be at least 32 inches in width.
- (4) **TYPE OF EXITS.** (a) Required exits shall be by a door leading directly to a stairway, smokeproof tower, ramp, horizontal exit, exit passageway or outside the building as specified in this subchapter. No more than one-half of the required exits may be horizontal exits.
- (b) Where a detention or correctional facility, other than a hospital or nursing home, is located on the upper floors of a building having a different occupancy, at least one of the exits from the detention or correctional facility shall be a separate smokeproof tower as specified in s. ILHR 51.17. The smokeproof tower shall serve only the detention or correctional facility and there shall be no doors opening into the smokeproof tower from any other occupancy of the building.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.50 Stairways. (1) **GENERAL.** (a) All required exit stairways shall comply with the requirements specified in s. ILHR 51.16 and shall be enclosed as specified in s. ILHR 51.18. FP

(b) 1. Except as provided in subd. 2., stairways in addition to those required by this chapter need not lead to the outside but shall be enclosed as required in par. (a).

2. Nonrequired stairways serving open mezzanines need not be enclosed.

(2) **STAIRWAY TERMINATION.** Stairways provided in addition to those required by this subchapter shall be enclosed as specified in s. ILHR 51.18 but need not lead to the outside. A sign or label shall be posted on the doors of the stair enclosures and shall bear the following: "Not an Exit".

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. Register, December, 1983, No. 336, eff. 1-1-84; am. (1) (a) and cr. (1) (b), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.51 Smokeproof towers. Smokeproof stair towers shall comply with the requirements specified in ss. ILHR 51.17 and 58.48. FP

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.52 Horizontal exits. (1) **GENERAL.** Horizontal exits shall comply with the requirements in s. ILHR 51.19, except as modified in this section.

(2) **AREA.** At least 6 net square feet of accessible space per occupant shall be provided on each side of the horizontal exit for the total number of people in the adjoining compartment.

(3) **DOORS.** (a) A single door used as a horizontal exit shall serve one direction only, be at least 36 inches wide and swing in the direction of egress.

(b) Horizontal exit doors may be locked as specified in s. ILHR 58.59.

(4) **RESTRICTIONS.** If a horizontal exit is used as a smoke barrier, it shall comply with s. ILHR 58.67.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.53 Ramps. (1) **MINIMUM WIDTH.** (a) *Interior ramps.* Interior ramps shall be a minimum of 44 inches wide, of which not more than 4 inches on each side may be occupied by a handrail.

(b) *Exterior ramps.* Exterior ramps shall be a minimum of 48 inches wide, of which not more than 4 inches on each side may be occupied by a handrail.

(2) **SLOPE.** Ramps shall have a slope of not more than one foot of rise in 8 feet of run, except ramps providing access for the disabled shall comply with s. ILHR 52.04 (7).

(3) **ENCLOSURE .** Ramps used as a required means of egress shall comply with the enclosure requirements for stairways in s. ILHR 51.18.

(4) **LANDINGS AND PLATFORMS.** (a) If a door is provided at the top or bottom or both of a ramp, a landing or platform shall be placed between the door and the ramp regardless of the direction of swing of the door.

(b) Every landing or platform shall be at least as wide as the ramp, measured at right angles to the direction of travel. The length of every landing or platform shall be at least as wide as the ramp, but need not exceed 48 inches.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (4), Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 58.54 Required exit width. (1) **OCCUPANT LOAD.** The occupant load for which means of egress shall be provided shall be the maximum number of persons occupying that floor, but not less than one person for each 120 sq. ft. gross floor area.

(2) **REQUIRED EXIT WIDTH.** The required exit width shall comply with s. ILHR 51.15 (6).

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.55 Arrangement of means of egress. (1) **SLEEPING ROOM.** Every sleeping room shall have a door leading directly to an exit access, except where an exit door opens directly to the outside from the room at the ground level.

(2) **CORRIDOR ACCESS.** (a) Every aisle, corridor and hallway shall provide access to at least 2 exits complying with s. ILHR 58.48.

(b) Every aisle, corridor and hallway used for exit access shall be at least 44 inches in clear and unobstructed width.

(3) **EXIT PASSAGEWAYS.** Every exit passageway shall be at least 44 inches in width.

Register, March, 1992, No. 435

(4) **AREA EXITING.** Any room, suite of rooms, space or area accommodating 25 persons or more, shall have at least 2 exit access doors distributed to provide the best possible means of egress from the room.

(5) **SECURITY VESTIBULE EXITING.** A security vestibule may be permitted in a means of egress where there are provisions for continuous and unobstructed passage through the security vestibule during an emergency exit condition.

(6) **DEAD END CORRIDOR.** Every exit or exit access shall be so arranged that no corridor, aisle or passageway has a pocket or dead end exceeding 30 feet.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (6), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 58.56 Measurement of travel distance to exits. All exits in detention and correctional facilities shall be located to provide means of egress remote from one another.

(1) **EXIT ACCESS TO AN EXIT.** Travel distance shall be measured along passageways. The distance between any room door required as an exit access and an exit shall not exceed 100 feet, except that in buildings protected with a complete automatic sprinkler system the distance shall not exceed 150 feet.

(2) **ROOM TO AN EXIT.** Travel distance shall be measured along passageways. The distance between any point in a room and an exit shall not exceed 150 feet, except that in buildings protected with a complete automatic sprinkler system the distance shall not exceed 200 feet.

(3) **SLEEPING ROOM TO AN EXIT ACCESS.** Travel distance shall be measured along passageways. The distance between any point in a sleeping room or suite and an exit access door to that room or suite shall not exceed 50 feet.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.57 Illumination of means of egress. (1) **ILLUMINATION.** Artificial lighting shall be provided at all exits and for such period of times as required to maintain safe exiting.

(2) **ILLUMINATION LEVEL.** The floors of means of egress shall be illuminated at all points including angles and intersections of corridors and passageways, stairs, landings of stairs and exit doors to values specified in ch. Ind 19.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 58.575 Emergency lighting. Emergency lighting complying with the requirements specified in ch. ILHR 16 shall be required when 20 or more resident beds are provided. **FP**

History: Cr. Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 58.58 Marking of means of egress. (1) **EXIT SIGNS.** Every required exit shall be identified with an internal illuminated, red exit sign bearing the word "EXIT" or "OUT" in plain letters not less than 6 inches high, with the principal strokes of the letter not less than $\frac{3}{4}$ inches. **FP**

(2) **DIRECTIONAL SIGNS.** An illuminated sign, not less than 6 inches high, reading "EXIT" or similar designation, with an arrow indicating

the direction, shall be placed in every location where the direction of travel to reach the nearest exit is not immediately apparent.

(3) **OBSTRUCTIONS.** (a) Decorations, furnishings or equipment which impair visibility of an exit sign shall not be permitted. Displays, objects in or near the line of vision to the required exit sign, or brightly illuminated signs used for purposes other than exits shall not be permitted so as to detract attention from the exit sign.

(b) Hangings or draperies shall not be placed over exit doors or be located as to conceal or obscure any exit. Mirrors shall not be placed on exit doors. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of exit.

(4) **SPECIAL SIGNS.** Any door, passage, or stairway which is neither an exit nor a way of exit access, and which is located or arranged that it may be mistaken for an exit, shall be identified by a sign indicating it is not an exit.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 58.59 Door locks. All doors in detention and correctional facilities having locking devices shall comply with the following requirements:

(1) **LOCKING OF MEANS OF EGRESS DOORS.** All doors in detention and correctional facilities may be locked in accordance with this section, providing that staff is on duty 24 hours a day.

(a) *Locks at sleeping rooms.* 1. Single sleeping room. A single sleeping room may be key locked.

2. Two or more sleeping rooms. Where 2 or more sleeping rooms within a smoke compartment are locked, a remote locking and unlocking device shall be provided. The remote locking and unlocking device shall be located outside of the sleeping room areas.

(b) *Locks at exterior doors, stairways and horizontal exits.* Doors from the secured areas to the exterior of the building, into stairway enclosures or at horizontal exits may be locked with a key lock. The keys to unlock such doors shall be maintained and available at the facility at all times and the locks shall be operable from the outside.

(2) **REMOTE RELEASE.** All remote release operated doors shall be provided with a back-up means of operation as follows:

(a) Power-operated sliding doors or power operated locks shall be so constructed that in the event of power failure a manual mechanical means to release and open the doors is provided at each door and either emergency power in accordance with ch. ILHR 16 is provided for the power operation or a remote manual mechanical release is provided.

(b) Mechanically operated sliding doors or mechanically operated locks shall be provided with a manual mechanical means to release and open the door at the door.

(3) **REMOTE UNLOCKING.** Doors remotely unlocked under emergency conditions shall not automatically relock when closed unless specific action is taken at the remote location to enable doors to relock.

(4) **STANDBY EMERGENCY POWER.** Standby emergency power shall be provided for all electrically power-operated doors and power-operated

locks. Power shall be arranged to automatically operate upon failure of normal power within 10 seconds and to maintain the necessary power source for at least 1½ hours.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (1) (b), Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. (2), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 59.13 Types of exits. (1) **GENERAL.** (a) Only the following types of exits shall be used to comply with the provisions of s. ILHR 59.14: **FP**

1. Standard exit as specified in s. ILHR 51.15, except as provided in sub. (2);
2. Stairways as specified in s. ILHR 51.16, except as provided in sub. (2);
3. Smokeproof stair tower as specified in s. ILHR 51.17;
4. Interior enclosed stairway as specified in s. ILHR 51.18;
5. Horizontal exit as specified in s. ILHR 51.19;
6. Fire escapes as specified in s. ILHR 51.20; and
7. Nonparking access ramps with a maximum slope of 1:8.

(b) At least half of the exits required under s. ILHR 59.14 shall be standard exits, stairways, smokeproof stair towers or interior enclosed stairways to grade.

(2) **EXCEPTIONS.** (a) A spiral stairway shall not serve as a required exit, but may be used as an employe convenience stairway if located in nonpublic areas.

(b) The width of required exit stairways serving unoccupied areas, such as storage areas, equipment mezzanines and similar areas not exceeding 750 sq. ft. may be reduced to 3 feet 0 inches.

(c) Doors in standard exits serving rooms, spaces or areas with an occupancy load of 25 persons or less are not required to swing in the direction of egress.

(d) A door not complying with s. ILHR 51.15 (2), may be used as a standard exit serving storage garages or storage areas not exceeding 3,000 square feet in area.

Note: Where accessibility and interior circulation for persons with functional limitations must be provided, the requirements of s. ILHR 52.04 (9) govern.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (d), Register, August, 1985, No. 356, eff. 1-1-86.

ILHR 59.14 Number and location of exits. (1) **GENERAL.** (a) Except as provided in par. (b), every floor level and every room, space or area of a storage garage and a repair garage shall be provided with at least 2 exits. **FP**

(b) One exit is permitted from the following:

1. Any room, space or area used for storage garage purposes with an occupancy load of 10 persons or less and which does not exceed 3,000 sq. ft. in net floor area;

2. Any room, space or area used for repair garage purposes and does not exceed 750 sq. ft. in net floor area;

3. Any room, space or area used as other than a storage or repair garage with an capacity of 25 persons or less; and

4. A mezzanine floor level, provided the mezzanine is:

- a. Three thousand square feet or less in net floor area;
- b. Used only for storage purposes;
- c. Open on at least one side to the floor below; and
- d. Not more than 12 feet above the floor below.

(2) **EXIT DISTANCE.** Exits shall be provided and distributed as follows:

(a) *Storage garages.* 1. No area of a storage garage shall be more than 100 feet from an exit, unless the entire storage garage is protected by an automatic sprinkler system.

2. No area of a storage garage entirely protected by an automatic fire sprinkler system shall be more than 200 feet from an exit.

(b) *Repair garages.* 1. No area of a repair garage shall be more than 75 feet from an exit, unless the entire repair garage is protected by an automatic fire sprinkler system.

2. No area of a repair garage entirely protected by an automatic fire sprinkler system shall be more than 150 feet from an exit.

(c) **Measurement of exit distance.* The exit distances required by this section shall be measured along public passageways and aisles to:

1. Standard exits leading to grade as specified in s. ILHR 51.15;
2. Doors opening into smokeproof stair towers as specified in s. ILHR 51.17, interior enclosed stairways as specified in s. ILHR 51.18, or fire escapes as specified in s. ILHR 51.20; or
3. Horizontal exits as specified in s. ILHR 51.19.

(3) **LOCATION OF EXITS.** Except as provided in sub. (1) (b), exits in all storage garages and repair garages shall be located and distributed so that in the event an exit is blocked, another exit is available from every area of the storage garage or repair garage.

(4) **EXIT LIGHTS.** All required exits shall be identified by an approved exit light. Directional exit lights shall be provided to direct occupants to the exits. Exit lights and directional exit lights shall be as specified in s. ILHR 51.15 (5).

(5) **EXIT MAINTENANCE.** Exits shall be maintained in accordance with s. ILHR 52.21.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (4), Register, December, 1983, No. 336, eff. 1-1-84; emerg. am. (2) (a) 2. and (b), eff. 9-6-86; am. (2) (a) 2. and (b), Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 59.15 Required exit width. (1) **GENERAL.** Every floor level of a storage garage and repair garage shall be provided with at least the required aggregate width of exits as specified in ss. ILHR 51.15 (6) and 51.16 (3).

*See Appendix A for further explanatory material.

(2) **HORIZONTAL EXITS.** Horizontal exits may provide up to one-half of the required aggregate width of exits for a floor level.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 59.16 Capacity of structures. In calculating the required aggregate width of exits under s. ILHR 59.15 and the required number of sanitary facilities under s. ILHR 59.20, the capacities of structures and floor levels shall be computed on the following basis:

- (1) Storage garages and repair garages - 300 sq. ft. per person; and
- (2) Other areas as dictated by the appropriate sections of chs. ILHR 54 to 62.

Note: See ss. ILHR 54.05, 55.06, 56.07 for additional requirements.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 59.17 Enclosure of stairways and shafts. (1) **TWO FLOOR LEVELS.** (a) All stairways and vertical openings serving 2 floor levels shall be enclosed with smoke partitions, unless:

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1. The stairway or opening serves an open storage mezzanine less than 3,000 square feet in area;

2. The opening is not a required means of egress and the opening is separated from any exit access corridor or exit stairway by at least smoke partitions as specified in par. (a); or

3. The two-connected floor levels:

- a. Are provided with six air changes of ventilation;
- b. Are provided with interconnected fire detectors in accordance with NFPA 72;
- c. Do not have open flame equipment located in the lower level; and
- d. Have only pneumatic power equipment available for use.

(b) Smoke partitions enclosing stairways or vertical openings shall be constructed of solid and rigid materials.

(c) Openings in smoke partitions shall be protected with doors equipped with automatic closing devices.

(2) **THREE OR MORE FLOOR LEVELS.** Stairways and shafts serving 3 or more floor levels shall be enclosed pursuant to s. ILHR 51.18 with fire-resistive construction as specified in Table 51.03-A.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; reprinted to correct error in (2), Register, February, 1982, No. 314; am. (2), Register, October, 1982, No. 322, eff. 11-1-82; r. and recr. (1), Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 60.12 Doors. (1) All exit doors, and all doors along the path of travel to an exit, shall meet the requirements of s. ILHR 51.15 with the following exceptions:

FP

(a) The width of all required exit doors may be reduced to 2 feet 8 inches in existing buildings not accommodating more than 8 children;

(b) All such doors used by not more than 25 persons need not swing outward;

(c) All such doors in centers serving 20 or less children need not be provided with illuminated exit signs; and

(d) Sliding glazed patio-type doors may serve as the second exit. A means to prevent accumulation of snow and ice in the door track or freezing of the door shall be provided.

(2) Every closet door latch shall be such that children can open the door from inside the closet.

(3) Every toilet room door lock shall be designed to permit opening of the locked door from the outside in an emergency, and the opening device shall be readily accessible to the staff.

History: Cr. Register, October, 1974, No. 226, eff. 11-1-74; cr. (1)(d), Register, December, 1977, No. 264, eff. 1-1-78; r. (1)(a), renum. (1)(b) to (d) to be (1)(a) to (c), Register, January, 1980, No. 289, eff. 2-1-80; am. (1) (c), Register, May, 1980, No. 293, eff. 6-1-80; cr. (1) (d), Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 60.31 Exiting. (1) Each floor shall have not less than 2 exits. All required exits shall lead directly, or through an enclosed stairway, to the outside.

(2) The exits shall be located to provide the best possible means of egress.

(3) Travel distance measured along safe passageways between:

(a) Any point in a sleeping room or suite and an exit access door of that room or suite shall not exceed 50 feet;

(b) Any room door intended as an exit access and an exit shall not exceed 50 feet; and

(c) Any point in a room or suite and an exit shall not exceed 100 feet.

(4) The travel distances in sub. (3) shall be reduced by 50% for children under the age of 24 months.

(5) The travel distances in sub. (3) may be increased by 50 feet in buildings completely protected with an automatic fire sprinkler system. No increase in travel distance is permitted for children under the age of 24 months.

(6) Children under the age of 24 months shall be restricted to the first floor, as determined in s. ILHR 51.02 (14), or to ground floors as defined in s. ILHR 51.01 (67).

History: Cr. Register, October, 1974, No. 226, eff. 11-1-74; am. (4), (5) and (6) Register, December, 1977, No. 264, eff. 1-1-78; am. (6), Register, December, 1983, No. 336, eff. 1-1-84; am. (4) and (5), Register, August, 1985, No. 356, eff. 9-1-85.

FP ILHR 60.32 Required exit width. (1) The total required exit width from a building level shall be in accordance with the requirements of ss. ILHR 51.15 (6) and 51.16 (3).

(2) If horizontal exits (s. ILHR 51.19) are provided for any floor, the number of persons accommodated on such floor may be increased at the rate of 100 persons for each 40 inches of width of such exits, provided such increase shall not exceed 100% of the number of persons accommodated by the stairways.

History: Cr. Register, October, 1974, No. 226, eff. 11-1-74; r. and recr. Register, December, 1974, No. 228, eff. 1-1-75.

Register, March, 1992, No. 435

ILHR 60.33 Passageways. (1) The minimum unobstructed width of corridors and passageways shall be determined in the same manner as specified for stairways and exits in s. ILHR 60.32. The minimum width shall be not less than 3 feet 8 inches. **FP**

(2) The minimum passageway width shall not be less than 3 feet in existing buildings proposed to be used as day care centers, provided the capacity of the day care center does not exceed 40 persons.

History: Cr. Register, October, 1974, No. 226, eff. 11-1-74.

ILHR 60.34 Stair and shaft enclosure. (1) **GENERAL.** Except as provided in sub. (2), all stairs and vertical shafts serving 2 or more floor levels shall comply with the requirements of s. ILHR 51.02 (11) and Table 51.03-A. All required stair enclosures shall lead to the outside without interruption. **FP**

(2) **EXCEPTIONS.** (a) Exit stairways serving day care centers located in one story places of worship need not be enclosed.

(b) Exit stairways serving day care centers located in one and two story schools constructed prior to January 1, 1982 need not be enclosed.

(c) Unenclosed stairways, connecting the floor of exit discharge with one adjacent floor level, may be used as required exits for day care centers accommodating 9 to 39 children, provided the stairways are enclosed at all other levels with fire-resistive rated construction equal to or better than the hourly rating specified in Table 51.03-A.

History: Cr. Register, October, 1974, No. 226, eff. 11-1-74; am. (1), Register, October, 1982, No. 322, eff. 11-1-82; r. and recr. Register, August, 1985, No. 356, eff. 9-1-85.

ILHR 61.12 Exiting and doors. (1) **NUMBER, TYPE AND ACCESS TO EXITS.** (a) All CBRF, and each floor level having habitable rooms, shall have at least 2 means of exit which provide unobstructed travel to the outside at street or grade level. **FP**

1. *Exception.* A single exit will be permitted from basements or attics utilized for recreational, nonsleeping purposes only.

2. A wooden balcony or a flat roof, within 10 feet of grade, or an exterior wood stair may serve as one of the required exits from the second floor of a 2-story CBRF, except Class B and C CBRF with nonambulatory residents on the second floor.

(b) Exits shall be standard exits to grade (doors), stairways as specified in sub. (3), or fire escapes. (See exception under sub. (1) (a) 1.)

(c) No exit passageway shall be through a private room or bath/toilet room.

(d) Exit passageways and stairways to the outside exits shall be at least 3 feet wide, except existing secondary exit passageways, stairways and doors may be reduced to 2 feet 4 inches in width.

(e) The required width shall be maintained clear and unobstructed at all times.

(2) **DOORS.** (a) Outside exit doors and doors in exit access corridors shall be at least 2 feet 8 inches in width, except as provided in sub. (1) (d) for existing secondary exit doors.

(b) All doors shall have such fastenings or hardware that they can be opened from the inside with one hand without the use of a key.

(c) Closet doors shall be openable from the inside.

(d) All interior doors equipped with locks shall be designed to permit opening of the locked doors from either side in case of emergency.

(3) **STAIRS: GENERAL.** (a) *Treads and risers.* All required interior and exterior exit stairways shall have a minimum tread width (exclusive of nosing or projection) of 9 inches and a maximum riser height of 8 inches.

1. *Exception.* Stairs serving basements and attics without habitable rooms may have a minimum tread width (exclusive of nosing or projection) of 8 inches and a maximum riser height of 9 inches.

(b) *Handrails.* One or more handrails, at least 29 inches above the nose of the tread, shall be provided on all stairways. Handrails shall be provided on the open sides of stairways and platforms.

(c) *Winder stairs.* 1. Winders in stairways shall be provided with handrails on both sides, at least 29 inches above the nose of the tread.

2. Winders in stairways used as required exits shall have treads of at least 7 inches in width at a point one foot from the narrow end of the tread.

(d) *Spiral stairs.* Spiral stairs shall be prohibited for use as required exit stairs.

(4) **STAIRS: ENCLOSURE.** (a) Three-story CBRF shall have at least one stairway exit, enclosed with at least one-hour rated construction, leading to a first-story outside exit.

(b) CBRF, 4 or more stories in height, shall have all stairways enclosed with at least one-hour rated construction. All required exit stairways shall have such enclosures leading to a first-story outside exit.

Note: Buildings of Type 1 and 2 construction require 2-hour rated stair enclosures in accordance with s. ILHR 61.03 (1) and (2).

(5) **ILLUMINATION.** All exit passageways and stairways shall be capable of being illuminated at all times.

History: Cr. Register, May, 1978, No. 269, eff. 7-1-78.

FP ILHR 62.26 Number, location and type of pedestrian exits. (1) **NUMBER OF EXITS.** Every open parking structure and every floor level thereof shall have at least 2 exits.

(2) **DISTANCE TO EXITS.** Additional exits shall be provided so that no part of the open parking structure will be more than 200 feet distant to the exit discharge grade or to a stair enclosure if the walls separating the stair from the open parking structure are of at least noncombustible one-hour (NC-1) rating or better and the enclosure is continuous to an outside exit.

Note: In all cases, required exit stairs are required to be enclosed (see s. ILHR 62.27). If the designer elects to increase the exit distance by measuring to the stair enclosure, the enclosure must have at least a noncombustible one-hour (NC-1) rating.

(3) **LOCATION OF EXITS.** Exits in all open parking structures shall be placed as far apart as practicable and so located that if any exit is Register, March, 1992, No. 435

blocked, some other exit will still be available from every part of the structure.

(4) **TYPE OF EXITS.** At least one-half of the exits required by this section shall be standard exits to grade, stairways or horizontal exits as specified in ss. ILHR 51.15, 51.16 and 51.19, respectively. The other exits may be non-parking access ramps with a maximum slope of 1:8.

History: Cr. Register, December, 1977, No. 264, eff. 1-1-78; am. (4), Register, December, 1978, No. 276, eff. 1-1-79; am. (4), Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.27 Stairway enclosures. Stair enclosures of NC-0 hour rating, or better, shall be provided for all required exit stairways, unless otherwise required to be rated.

Note: It is the intent of s. ILHR 62.27 to require all required exit stairs to be enclosed. If the designer elects to measure the exit distance to the stair enclosure, the enclosure must be then rated. (See s. ILHR 62.26 (2).)

History: Cr. Register, December, 1977, No. 264, eff. 1-1-78.

ILHR 62.47 Exits. (1) **NUMBER OF EXITS.** (a) Every tent occupied by the public shall have at least 2 standard exits located at or near opposite ends of the structure. **FP**

(b) In tents used for assembly purposes, exits shall be provided on 3 sides if the capacity exceeds 600 persons and on 4 sides where the capacity exceeds 1,000 persons.

(2) **EXIT DISTANCE.** Exits shall be uniformly distributed but in no case shall the line of travel to an exit be greater than 150 feet.

(3) **EXIT WIDTH.** The total width of exits from a tent used for assembly purposes shall be not less than 44 inches per 100 persons. Exit openings shall comply in all respects with with the requirements of ss. ILHR 51.15 and 55.10.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.75 Means of egress. (1) **TYPE OF EXITS.** (a) Except as provided in par. (b), all required exits from any part of a seating facility shall be doorways, stairways or ramps conforming to the requirements specified in ss. ILHR 55.08 through 55.10. **FP**

(b) Doorways, stairways and ramps are not required for assembly seating facilities when aisles are not required.

(2) **NUMBER OF EXITS.** (a) *Outdoor seating.* Every outdoor seating facility, and every balcony or tier considered separately, shall be provided with at least 2 exits located as remote from each other as practicable and leading directly to the outside at grade. If the capacity of any such facility, balcony or tier exceeds 1,000 persons, there shall be at least 3 exits and where the capacity exceeds 4,000 persons, there shall be at least 4 exits.

(b) *Indoor seating.* The number of exits for every indoor seating facility shall comply with the requirements as specified in s. ILHR 55.07.

(3) **DISTANCE TO EXITS.** Exits shall be distributed uniformly to prevent congestion and shall be so located that the line of travel to an exit or to a street, alley or open court is not greater than 150 feet.

(4) **AGGREGATE WIDTH OF EXITS.** (a) *Outdoor seating.* The total clear width of exits from any outdoor seating facility shall be not less than 22 inches for each 500 persons, or fraction thereof.

(b) *Indoor seating.* The total clear width of exits off of any indoor seating facility shall be not less than 22 inches per 100 persons, or fraction thereof.

(5) **EXIT LIGHTS AND SIGNS.** Exit lights and signs shall comply with the requirements as specified in s. ILHR 55.11.

(6) **AISLES REQUIRED.** (a) Except as provided in par. (b), aisles shall be required in all seating facilities.

(b) Aisles may be omitted provided all of the following conditions exist:

1. Seats are without backrests;
2. The rise between rows does not exceed 12 inches;
3. The number of rows does not exceed 20 for outdoor seating facilities or 16 for indoor seating facilities;
4. The row spacing does not exceed 28 inches; and
5. The first seatboard is not more than 20 inches above the ground or floor.

(7) **AISLE WIDTH.** Aisles having seats on both sides shall be not less than 42 inches in width and aisles having seats on one side only shall be not less than 36 inches wide.

(8) **AISLE LOCATION.** (a) *Outdoor seating.* For seating not within a building, the number of seats between any seat and an aisle shall not be greater than 20 when the seats are without backrests and 11 when the seats have backrests.

(b) *Indoor seating.* Except as provided in par. (c), the number of seats between any seat and an aisle for seating within a building, shall not be greater than 9 when the seats are without backrests and 6 when the seats have backrests.

(c) *Continental seating.* The number of seats between any seat and an aisle may be increased to 49 where:

1. A minimum unobstructed passage of 22 inches is provided between rows of unoccupied seats; and
2. The unobstructed passage between rows leads to a side aisle on each end of the rows where exit doors are located at no more than 20 foot intervals leading to an exit corridor or exit court.

(9) **CROSS AISLES.** Where provided, aisles parallel to the seat rows shall be not less than 48 inches in width.

(10) **UNOBSTRUCTED MEANS OF EGRESS.** No aisle, stair, door or other way of ingress or egress shall be obstructed in any manner while the seating facility is occupied by the public.

ILHR 62.76 Seating. (1) **SEATING ARRANGEMENTS.** A minimum 12-inch spacing shall be provided between the back of each seat and the front of the seat immediately behind it. The seating arrangement shall comply with the spacing requirements specified in Table 62.76. Where the same level is used for both seats and footrests, the width of this level shall be not less than 26 inches.

TABLE 62.76
ROW SPACING REQUIREMENTS

Type of Seating	Minimum Back-to-Back Spacing ¹ (Inches)
Seats without backrests	22
Seats with backrests	30
Chair seating	32

¹All measurements are taken between plumb lines.

(2) **FOOTRESTS.** Where the same level is not used for both seatboard and footboard, independent footrests shall be provided.

(3) **SEATBOARDS AND FOOTBOARDS.** (a) Seatboards and footboards (footrests) shall have a minimum width of 9 inches.

(b) All seatboards and footboards shall be fastened in place in such a manner that they cannot be accidentally displaced.

(4) **SEAT OCCUPANT WIDTH.** The seating capacity shall be established by allowing one sitting or seat to each 18 inches of length.

(5) **RISE BETWEEN ROWS.** The maximum rise between seat rows shall not exceed 16 inches unless the horizontal row spacing is 40 inches or more.

(6) **STEPS.** Where the rise between rows exceeds 12 inches, intermediate steps shall be provided the full width of the aisles. Such steps shall have a uniform rise of not more than 8 inches and a tread of not less than 10 inches in width. In no case shall the angle of seating exceed 45 degrees.

(7) **OPENINGS.** The design of the seatboards and footboards shall be such that a sphere with a diameter larger than 9 inches will not pass from the seating area to the area beneath the seating where seatboards are more than 5 rows above the ground or floor.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 62.95 Exits. (1) **NUMBER OF EXITS.** (a) Except as provided in par. (b), every greenhouse shall have at least 2 exits.

(b) Greenhouses with 3,000 or less square feet gross floor area may have one exit.

(2) **EXIT DISTRIBUTION.** (a) Exits shall be distributed or located so that no part of any greenhouse will be more than 150 feet distant from an exit.

(b) Where an approved automatic fire sprinkler system is provided throughout the greenhouse, the exit distance may be increased to 300 feet.

(3) **TYPE OF EXITS.** (a) In production greenhouses, at least one-half of the exits required by this section shall be standard exit doors to grade. The other exits may be sliding doors.

(b) In mercantile or teaching greenhouses, the required exits shall be standard exits to grade as specified in s. ILHR 51.15.

History: Cr. Register, December, 1983, No. 336, eff. 1-1-84; emerg. am. (2) (b), eff. 9-6-86; am. (2) (b), Register, November, 1986, No. 371, eff. 12-1-86.

FP ILHR 62.99 Exiting. (1) **NUMBER OF EXITS.** (a) Except as provided in sub. (3), every pedestrian access structure, and every level, other than the open space below the structure, shall be provided with at least one exit.

(2) **TYPE OF EXITS.** (a) Except as provided in par. (b), the exit specified in sub. (1) from the pedestrian access structure shall be an exit door to grade, a stairway to grade constructed as specified in s. ILHR 51.16, or a fire escape to grade constructed as specified in s. ILHR 51.20.

(b) 1. Open stairways or fire escapes may not be used as an exit for any level more than 55 feet above grade.

2. Type "A" fire escapes may terminate on a platform at least 3 feet long, located not more than 10 feet above grade.

(3) **EXCEPTIONS.** The exit specified in sub. (1) from the pedestrian access structure may be omitted providing:

(a) The doors connecting the structure and the building are equipped with exit hardware such that a person can pass from the structure into the building; or

(b) The doors connecting the structure and the building are equipped with hardware that requires a key to pass from the building onto the structure, and that key will also open the door allowing passage from the structure back into the building.

(4) **EXIT DISTANCE.** (a) Except as provided in par. (b), exits shall be distributed or located so that no part of the pedestrian access structure will be more than 200 feet distance from an exit.

(b) Where approved automatic fire sprinklers are provided throughout the pedestrian access structure, an increase in exit distance to 300 feet will be permitted.

History: Cr. Register, August, 1985, No. 356, eff. 1-1-86.

A14.51 (1) Tents. The following is a reprint of ch. ILHR 62, Subch. III - Tents:

Subchapter III — Tents

ILHR 62.42 Scope. The requirements of this part shall apply to all tents, except those used exclusively for construction purposes.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.43 Area limitation and setbacks. (1) **AREA OF GROUND COVERED.** No tent shall be erected to cover more than 75% of the premises on which it is located.

Register, March, 1992, No. 435

(2) **SETBACK TO PROPERTY LINE AND OTHER STRUCTURES.** (a) Tents used for assembly purposes which cover 1500 square feet or more of ground area shall be located at least 20 feet from any other structure or adjoining property lines.

(b) Concession and other tents not used for assembly purposes need not be separated from each other and may be located less than 20 feet from other structures.

(3) **SETBACK FOR EXITING.** Stake lines of adjacent tents used for assembly purposes shall be sufficient distance from each other to provide an emergency exit passageway not less than 6 feet in width between stake lines. Proper protection shall be provided along such stake lines to eliminate tripping hazards.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.44 Structural requirements. (1) **MATERIAL SIZE AND STRENGTH.** Poles and other members supporting tents shall be of sufficient size and strength to support the structure safely without exceeding the stresses specified in ch. ILHR 53.

(2) **WIND LOAD.** (a) All tents shall be adequately guyed, supported and braced to withstand a wind pressure or suction of not less than 10 pounds per square foot.

(b) The poles, guys, stakes, fastenings and similar devices shall be of sufficient strength and so attached as to resist a wind pressure of at least 20 pounds per square foot of projected area of the tent.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.45 Flame resistance. All tents used for assembly purposes or in which animals are stabled and all other tents used by the public in places of outdoor assembly shall be effectively flameproofed. The owner shall furnish a certificate or a test report by a recognized testing engineer or laboratory as evidence that such tents have the required flame resistance.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.46 Fire hazards. (1) **CLEARING OF GROUND.** The ground enclosed by a tent used in connection with a place of outdoor assembly and for a distance of not less than 10 feet outside such structure on all sides shall be cleared of all flammable material or vegetation which will transmit fire. The premises shall be kept free from such flammable material during the period the premises are used by the public.

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(2) **COMBUSTIBLE MATERIAL FOR CARE OF ANIMALS.** No hay, straw, shavings or similar combustible materials other than that necessary for the current feeding and care of animals shall be permitted within any tents used for public assembly except that sawdust and shavings may be used if kept damp.

(3) **NO SMOKING.** No smoking or unapproved open flame of any kind shall be permitted in any tent while occupied by the public. "No Smoking" signs shall be conspicuously posted in all tents open to the public.

(4) **SAFETY FILM.** Tents shall not be used for motion picture performances unless safety film is used.

(5) **COMBUSTIBLE AND FLAMMABLE LIQUIDS.** Combustible and flammable liquids shall be isolated in accordance with ch. ILHR 10.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80; cr. (5), Register, March, 1991, No. 423, eff. 4-1-91.

FP ILHR 62.47 Exits. (1) **NUMBER OF EXITS.** (a) Every tent occupied by the public shall have at least 2 standard exits located at or near opposite ends of the structure.

(b) In tents used for assembly purposes, exits shall be provided on 3 sides if the capacity exceeds 600 persons and on 4 sides where the capacity exceeds 1,000 persons.

(2) **EXIT DISTANCE.** Exits shall be uniformly distributed but in no case shall the line of travel to an exit be greater than 150 feet.

(3) **EXIT WIDTH.** The total width of exits from a tent used for assembly purposes shall be not less than 44 inches per 100 persons. Exit openings shall comply in all respects with the requirements of ss. ILHR 51.15 and 55.10.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

ILHR 62.48 Toilet facilities. Separate toilet facilities, in conjunction with all tents used as places of outdoor assembly, shall be provided in accordance with s. ILHR 55.32. Toilet rooms and equipment shall comply with the requirements of ss. ILHR 52.50-52.64 of this code or as approved by the department.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

FP ILHR 62.49 Electrical installations. (1) **GENERAL.** Electrical systems in all tents used as places of outdoor assembly shall be installed in accordance with the requirements of the Wisconsin state electrical code, volume 2, ch. ILHR 16. All such systems shall be maintained and operated in a safe and workmanlike manner.

(2) **PROTECTION AND ISOLATION.** The electrical system and equipment shall be isolated from the public by proper elevation and guarding. All electrical fuses and switches shall be installed in approved enclosures. Cables laid on the ground or in areas traversed by the public shall be placed in trenches or protected by approved covers.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.

FP ILHR 62.50* Fire extinguishers. (1) **GENERAL.** Portable fire extinguishers shall be installed as specified in Table 62.50.

TABLE 62.50

Basic Minimum Extinguisher Rating	Maximum Travel Distance to Extinguisher (feet)	Area to be Protected per Extinguisher (sq. ft.)
1A	75	3,000
2A	75	6,000
3A	75	9,000
4A or larger	75	11,250

*See Appendix A for further explanatory material.

Register, March, 1992, No. 435

(2) **LOCATION.** (a) Extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire.

(b) Extinguishers shall not be obstructed or obscured from view.

(3) **MAINTENANCE.** Portable fire extinguishers shall be maintained as specified in s. ILHR 51.22.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80; r. and recr., Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 62.51 Illumination; exit lights and signs. (1) **LIGHTING OF EXITS.** All exits, aisles and passageways leading to exits in tents used as places of outdoor assembly shall be kept adequately lighted at all times when the structure is occupied by the public. Artificial illumination having an intensity of not less than 2.5 footcandles at the floor line shall be provided when natural light is inadequate. **FP**

(2) **ILLUMINATED EXIT SIGNS.** Exit lights and signs complying with the requirements of s. ILHR 55.11 shall be provided in all tents used as places of outdoor assembly where more than 100 persons can be accommodated.

History: Cr. Register, January, 1980, No. 289, eff. 2-1-80.