## 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

SBD-7959 (N. 02/88)

| | Year _____ | | | |
|---|---|---|---|---|
| | 1st Insp | 2nd Insp | 3rd Insp | 4th Insp |
| Date of Inspection | | | | |
| 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**

Street

| | | |
|---|---|---|
| Owner: | I. F. L. | O. F. L. |
| Owner Address: | Telephpone: | |
| Agent: | | |
| Agent Address: | Telephone: | |
| Occupant: | | |
| Occupant Address: | Telephone: | |
| Type of Business: | | |
| Construction: | Height: | Roof: |
| Fire Appliances: | | |
| Insurance Carrier: | | |
| Fire Dept. Conn: ☐ Yes ☐ 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: ☐ Yes ☐ No | If not used, Are tanks properly abandoned in place: ☐ Yes ☐ No | |

Number:

Classification:

SBD - 7958 (N 02/88) Station: _____

| | 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:

## FIRE DEPARTMENT BUILDING RECORD

STREET NAME OR NAME OF OCCUPANCY _____ NUMBER _____

STATION:____ CLASSIFICATION:____ FIRE LIMITS: _____ CARD NUMBER:____

OWNER:_____ ADDRESS:_____ TEL:_____

AGENT:_____ ADDRESS:_____ TEL:_____

OCCUPANT:_____ BUSINESS:_____ TEL:_____

CONSTRUCTION-WALLS:_____ ROOF:_____ NO. STORIES:_____

HEATING-TYPE:_____ LOCATION:_____ FIRE ALARM:____

EXTINGUISHERS:_____

SPRINKLERS: COMPLETE:____ PARTIAL:____ WET:____ DRY:____ OTHER:____

STANDPIPES: YES:____ NO:____ HOSE CABINETS: YES:____ NO:____ HOSE SIZE:____

GAS SHUT OFF LOCATION:_____ ELEC. SHUT OFF:_____

AIR CONDITIONING SHUT OFF:_____

| DATE | INSPECTOR | CONDITIONS FOUND | DATE | INSPECTOR | CONDITIONS FOUND |
|---|---|---|---|---|---|
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S80-2113

INSURANCE CARRIER: OWNER _____

OCCUPANT _____

ADDITIONAL OCCUPANTS: 1. _____

2. _____

3. _____

SPECIAL HAZARDS: LIQ. OXY: ____ L.P.: ____ CHLORINE: ____ HYDROGEN ____ OTHER ____

LOCATION OF HAZARDS: _____

_____

FLAMMABLES STORES: _____

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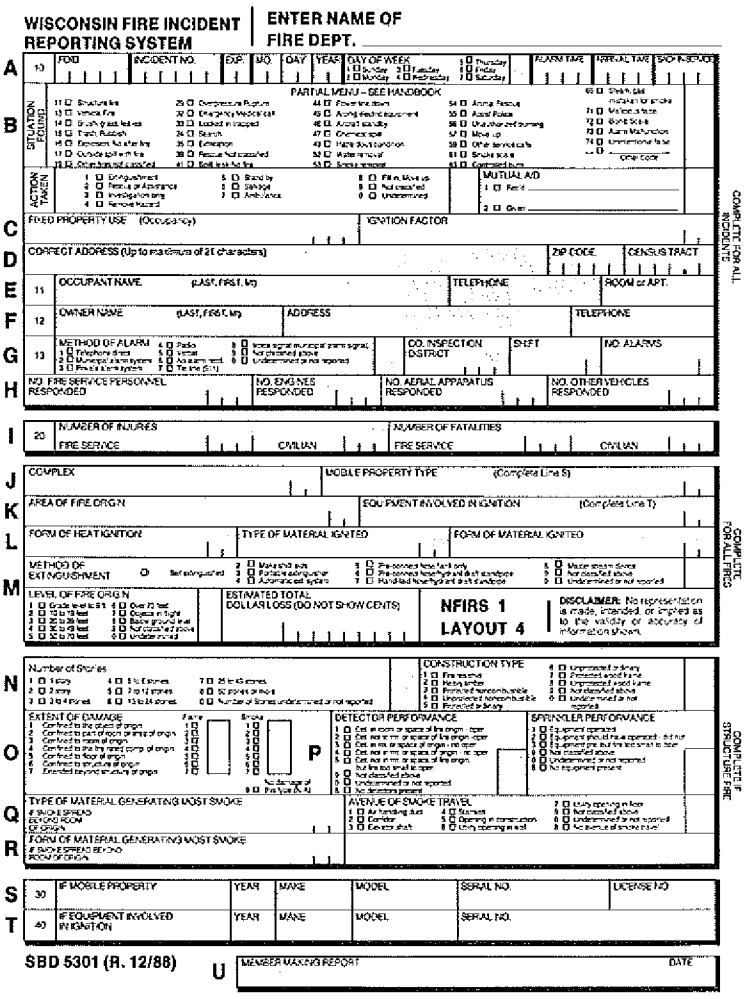
A14.02 (2) (e) Written fire reports. The following are reproductions of the NFIRS fire report forms which fire departments are encouraged to use in filing reports with the department. The forms are available at no cost from the Fire Prevention Section, Division of Safety and Buildings, P.O. Box 7969,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


WISCONSIN FIRE INCIDENT REPORTING SYSTEM
ENTER NAME OF FIRE DEPT.
FDID
INCIDENT NO.
DEP.
MO.
DAY
YEAR
DAY OF WEEK
ALARM TIME
ARRIVAL TIME
SVCS IN SERVICE
PARTIAL MENU – SEE HANDBOOK
SITUATION FOUND
ACTION TAKEN
MUTUAL AID
FIXED PROPERTY USE (Occupancy)
IGNITION FACTOR
CORRECT ADDRESS (Up to a maximum of 21 characters)
ZIP CODE
CENSUS TRACT
OCCUPANT NAME (LAST, FIRST, MI)
TELEPHONE
ROOM or APT.
OWNER NAME (LAST, FIRST, MI)
ADDRESS
METHOD OF ALARM
CO. INSPECTION DISTRICT
SHIFT
NO. ALARMS
NO. FIRE SERVICE PERSONNEL RESPONDED
NO. ENGINES RESPONDED
NO. AERIAL APPARATUS RESPONDED
NO. OTHER VEHICLES RESPONDED
NUMBER OF INJURIES
FIRE SERVICE
CIVILIAN
NUMBER OF FATALITIES
FIRE SERVICE
CIVILIAN
COMPLEX
MOBILE PROPERTY TYPE (Complete Line S)
AREA OF FIRE ORIGIN
EQUIPMENT INVOLVED IN IGNITION (Complete Line T)
FORM OF HEAT IGNITION
TYPE OF MATERIAL IGNITED
FORM OF MATERIAL IGNITED
METHOD OF EXTINGUISHMENT
LEVEL OF FIRE ORIGIN
ESTIMATED TOTAL DOLLAR LOSS (DO NOT SHOW CENTS)
NFIRS 1 LAYOUT 4
DISCLAIMER: No representation is made, intended or implied as to the validity or accuracy of information shown.
COMPLETE FOR ALL FIRES
Number of Stories
CONSTRUCTION TYPE
EXTENT OF DAMAGE
Fame
Show
P
DETECTOR PERFORMANCE
SPRINKLER PERFORMANCE
COMPLETE IF STRUCTURE FIRE
TYPE OF MATERIAL GENERATING MOST SMOKE
IF SMOKE SPREAD BEYOND ROOM OF ORIGIN
AVENUE OF SMOKE TRAVEL
FORM OF MATERIAL GENERATING MOST SMOKE
IF SMOKE SPREAD BEYOND ROOM OF ORIGIN
IF MOBILE PROPERTY
YEAR
MAKE
MODEL
SERIAL NO.
LICENSE NO.
IF EQUIPMENT INVOLVED IN IGNITION
YEAR
MAKE
MODEL
SERIAL NO.
SBD 5301 (R. 12/88)
MEMBER MAKING 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.

A 50 FDID | Incident No. | Exp No. | Mo. | Day | Year | Day of Week (1-Sun 2-Mon 3-Tues 4-Wed 5-Thurs 6-Fri 7-Sat) | Alarm Time

CASUALTY NUMBER

GA CASUALTY LAST NAME | FIRST NAME | MI | DATE OF BIRTH MO/YR | AGE | TIME OF INJURY

GB 51 HOME ADDRESS | TELEPHONE

GC SEX (1 Male, 2 Female) | CASUALTY TYPE (1 Fire Casualty, 2 Action Casualty, 3 EMS Casualty) | SEVERITY (1 Injury, 2 Death) | AFFILIATION (2 Other Emergency Personnel, 3 Civilian)

GD FAMILIARITY WITH STRUCTURE (1-Less than 1 Day, 2-1 to 7 Days, 3-8 to 30 Days, 4-1 to 2 Months, 5-3 to 6 Months, 6-7 to 12 Months, 7-Over 1 Year, 8-Not a Structure, 0-Undetermined or not reported) | LOCATION AT IGNITION (1-Initially involved with ignition, 2-In the room or space of fire origin, 3-On same floor as origin of fire, 4-In same building as origin of fire, 5-Outside of the building of fire origin but on property, 6-Fire casualty off property of fire origin, 8-Not a fire casualty, 9-Not classified above, 0-Undetermined or not reported) | CONDITION BEFORE INJURY (1-Asleep, 2-Bedridden, Other Physical Handicap, 3-Impaired by Drugs, Alcohol, 4-Under Restraint, 5-Too Young to Act, 6-Too Old to Act, 7-Mentally Handicapped, Senile, 8-Awake, Unimpaired, 9-Not Classified Above, 0-Undetermined or not reported)

GE CONDITION PREVENTING ESCAPE (1-No time to escape, explosion or fire progressed too rapidly, 2-Fire beyond casualty and exit, 3-Locked door, 4-Illegal gates, locks, 5-Clothing on casualty burning, 6-Moved too slowly, 7-Victim incapacitated prior to ignition, 8-No conditions prevented escape or not a factor, 9-Not classified above, 0-Undetermined or not reported) | ACTIVITY AT TIME OF INJURY (1-Escaping, 2-Rescue attempt, 3-Fire control, 4-Response/return, 5-Cleanup, salvage, mop-up, 6-Sleeping, 7-Unable to act, 8-Emotional action, 9-Not classified above, 0-Undetermined or not reported) | CAUSE OF INJURY (1-Caught in, under, between, trapped by, 2-Exposed to fire products, 3-Exposed to chemicals, radiation, 4-Fell or stepped on, over, into, 5-Overexertion, 6-Rubbed by, contact with, 7-Struck by, 8-Not applicable, 9-Not classified above, 0-Undetermined or not reported)

GF NATURE OF INJURY (1-Burns and asphyxia/smoke, 2-Burns only, 3-Asphyxia/smoke only, 4-Wound, cut, bleeding, 5-Dislocation, fracture, 6-Complaint of pain, 7-Shock, 8-Strain, sprain, 9-Not classified above, 0-Undetermined or not reported) | PART OF BODY INJURED (1-Head, neck, 2-Body, trunk, back, 3-Arm, 4-Leg, 5-Hand, 6-Foot, 7-Internal included are respiratory system, heart, 8-Multiple parts, 9-Not classified above, 0-Undetermined or not reported) | DISPOSITION (1-Refused help, 2-Treated at scene and released, 3-Taken to hospital by fire dept. vehicle, 4-Taken to hospital by non fire dept. vehicle, 5-Taken to other than a hospital, 6-Died, 8-Not classified above, 9-Not classified, 0-Undetermined or not reported)

SEE REMARKS ON BACK | SEE ADDITIONAL REPORT

CASUALTY NUMBER

GA CASUALTY LAST NAME | FIRST NAME | MI | DATE OF BIRTH MO/YR | AGE | TIME OF INJURY

GB 51 HOME ADDRESS | TELEPHONE

GC SEX (1 Male, 2 Female) | CASUALTY TYPE (1 Fire Casualty, 2 Action Casualty, 3 EMS Casualty) | SEVERITY (1 Injury, 2 Death) | AFFILIATION (2 Other Emergency Personnel, 3 Civilian)

GD FAMILIARITY WITH STRUCTURE (1-Less than 1 Day, 2-1 to 7 Days, 3-8 to 30 Days, 4-1 to 2 Months, 5-3 to 6 Months, 6-7 to 12 Months, 7-Over 1 Year, 8-Not a Structure, 0-Undetermined or not reported) | LOCATION AT IGNITION (1-Initially involved with ignition, 2-In the room or space of fire origin, 3-On same floor as origin of fire, 4-In same building as origin of fire, 5-Outside of the building of fire origin but on property, 6-Fire casualty off property of fire origin, 8-Not a fire casualty, 9-Not classified above, 0-Undetermined or not reported) | CONDITION BEFORE INJURY (1-Asleep, 2-Bedridden, Other Physical Handicap, 3-Impaired by Drugs, Alcohol, 4-Under Restraint, 5-Too Young to Act, 6-Too Old to Act, 7-Mentally Handicapped, Senile, 8-Awake, Unimpaired, 9-Not Classified Above, 0-Undetermined or not reported)

GE CONDITION PREVENTING ESCAPE (1-No time to escape, explosion or fire progressed too rapidly, 2-Fire beyond casualty and exit, 3-Locked door, 4-Illegal gates, locks, 5-Clothing on casualty burning, 6-Moved too slowly, 7-Victim incapacitated prior to ignition, 8-No conditions prevented escape or not a factor, 9-Not classified above, 0-Undetermined or not reported) | ACTIVITY AT TIME OF INJURY (1-Escaping, 2-Rescue attempt, 3-Fire control, 4-Response/return, 5-Cleanup, salvage, mop-up, 6-Sleeping, 7-Unable to act, 8-Emotional action, 9-Not classified above, 0-Undetermined or not reported) | CAUSE OF INJURY (1-Caught in, under, between, trapped by, 2-Exposed to fire products, 3-Exposed to chemicals, radiation, 4-Fell or stepped on, over, into, 5-Overexertion, 6-Rubbed by, contact with, 7-Struck by, 8-Not applicable, 9-Not classified above, 0-Undetermined or not reported)

GF NATURE OF INJURY (1-Burns and asphyxia/smoke, 2-Burns only, 3-Asphyxia/smoke only, 4-Wound, cut, bleeding, 5-Dislocation, fracture, 6-Complaint of pain, 7-Shock, 8-Strain, sprain, 9-Not classified above, 0-Undetermined or not reported) | PART OF BODY INJURED (1-Head, neck, 2-Body, trunk, back, 3-Arm, 4-Leg, 5-Hand, 6-Foot, 7-Internal included are respiratory system, heart, 8-Multiple parts, 9-Not classified above, 0-Undetermined or not reported) | DISPOSITION (1-Refused help, 2-Treated at scene and released, 3-Taken to hospital by fire dept. vehicle, 4-Taken to hospital by non fire dept. vehicle, 5-Taken to other than a hospital, 6-Died, 9-Not classified above, 0-Undetermined or not reported)

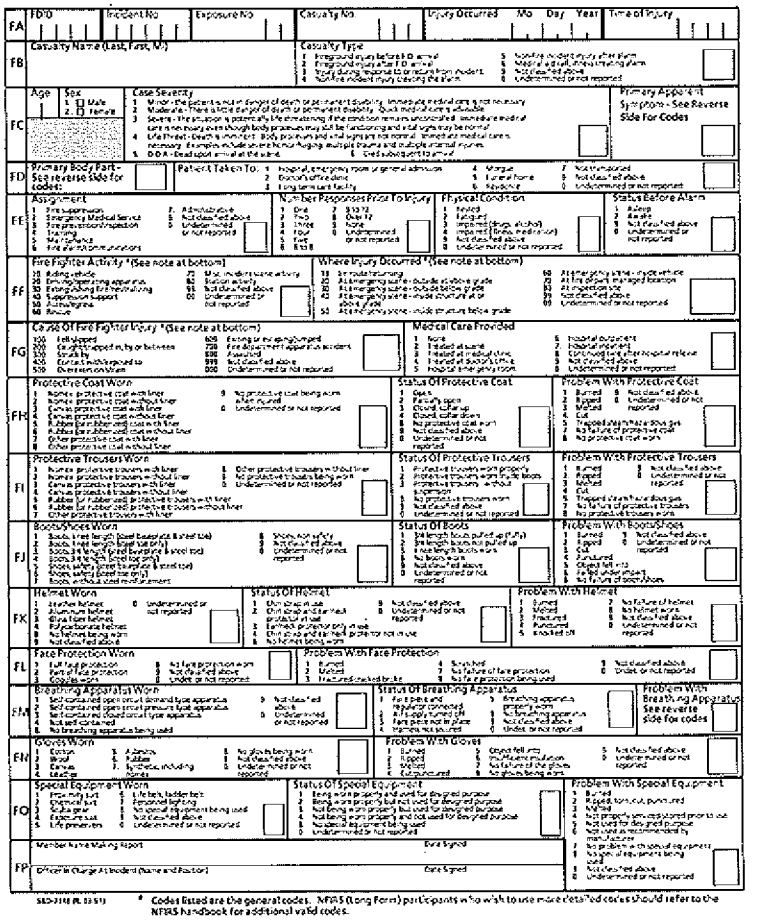
SEE REMARKS ON BACK | SEE ADDITIONAL REPORT

U OFFICER IN CHARGE AT INCIDENT (Name, Position) | Date | MEMBER MAKING REPORT | Date

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

STATE (DILHR)

**WISCONSIN FIRE INCIDENT REPORTING SYSTEM**
**Fire Department**
**WISCONSIN FIRE SERVICE CASUALTY REPORT**




SBD-7118 (R. 03-91)

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

### General Codes For PRIMARY BODY PART

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

### 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

HARNESS
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:<br>11 ☐ Structure Fire<br>13 ☐ Vehicle Fire<br>14 ☐ Brush, Grass, Leaves<br>15 ☐ Trash, Rubbish<br>16 ☐ Explosion, No After Fire<br>17 ☐ Outside Spill With Fire<br>19 ☐ Other Fires Not Classified | | | | | 4 Action Taken:<br>1 ☐ Extinguished<br>3 ☐ Investigation Only<br>4 ☐ Remove Hazard<br>9 ☐ Not Classified | | 5 Mutual Aid:<br>1 ☐ Received<br>2 ☐ Given<br>3 ☐ Not Applicable | |
| 6 | Fixed Property Use (Occupancy):<br>1 ☐ Public Assembly Property<br>2 ☐ Educational Property<br>3 ☐ Institutional Property<br>4 ☐ Residential Property<br>5 ☐ Store, Office Property<br>6 ☐ Basic Industry, Utility, Defense Property<br>7 ☐ Manufacturing Property<br>8 ☐ Storage Property<br>9 ☐ Special Property<br>0 ☐ Unknown | | | | | 7 Ignition Factor:<br>1 ☐ Incendiary, Suspicious<br>2 ☐ Misuse of Heat or Ignited Material<br>3 ☐ Smoking<br>4 ☐ Heating<br>5 ☐ Cooking<br>6 ☐ Electrical Distribution<br>7 ☐ Appliances, Air-Cond.<br>8 ☐ Open Flame, Torch<br>9 ☐ Other Heat<br>10 ☐ Other Equipment<br>11 ☐ Natural<br>12 ☐ Exposure<br>13 ☐ Unknown | | 8 Is fire attributable to children?<br>☐ Yes ☐ 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<br>**DO NOT SHOW CENTS:**<br>☐ Fire Department does not report dollar loss | | | | | 11 Smoke Detector Performance: Installed? ☐ Yes ☐ No ☐ Unknown<br>Did they activate? ☐ Yes ☐ No ☐ Unknown | | | |
| | | | | | | 12 Signature of Member Making Report: | | Date Signed: | |

SBD-8568 (N. 04/90) **DILHR**

**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 | OFFICE USE ONLY |
|---|---|
| Amount Paid | Petition No. |
| Receipt No. | E-Number |

| | | |
|---|---|---|
| Name of Owner/Petitioner | Building or Project | Agent, Architect or Engineering Firm |
| Company | Tenant Name, if any | Street & Number |
| Street & Number | Location, Street & Number | City State Zip Code |
| City State Zip Code | City County | Telephone Number |
| Telephone Number | Plan Number, if known | 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.

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

_____ Subscribed and sworn to before me this date: _____
Signature of Petitioner

_____ My commission expires: _____
Notary Public

SB-8(R.03/88)

**ILHR 14**

**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:

* If desired, Fire Departments may indicate "No Comment" on non-fire safety issues such as sanitary, energy conservation, structural, barrier free environments, etc.

4. ☐ I find no conflict with local rules and regulations
☐ 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.*

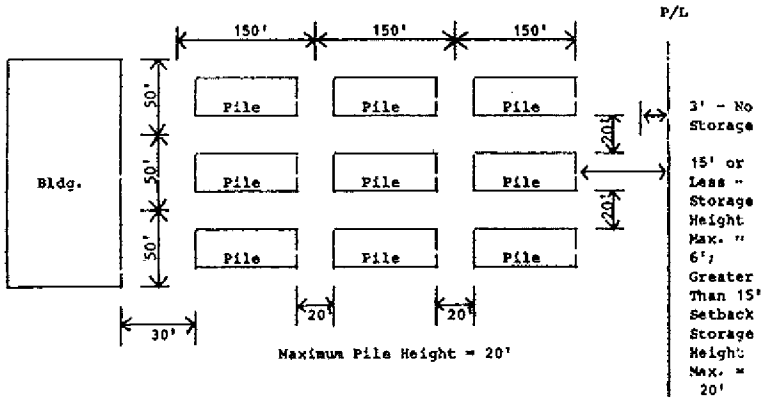
*(g) For the elimination of possible fire in enclosed spaces as a result of gas escaping through leaking or improperly closed torch valves, the gas supply to the torch shall be positively shut off at some point outside the enclosed space whenever the torch is not to be used or whenever the torch is left 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, nonignitible 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-resistive 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 ⅝ 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. FP

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: FP

(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 automati-

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] Walls & Ceilings[4] | Exit Access[1,2] Floor[5]a | Walls & Ceilings[4] | Floor[5] | Rooms or Enclosed Spaces[1,2] 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-1[6] |
| Ch. ILHR 54 Storage and Warehouse Occupancies | A or B | DOC FF-1[6] | A or B | DOC FF-1[6] | A, B or C | DOC FF-1[6] |
| Ch. ILHR 55 Places of Assembly | A | I | A | II | A or B[7] | DOC FF-1[6] |
| Ch. ILHR 56 Places of Instruction | A | I | A or B | II | A, B or C | DOC FF-1[6] |
| Ch. ILHR 57 Residential Occupancies | A | II | A or B | II | A, B or C | DOC FF-1[6] |
| Ch. ILHR 58 Health Care and Places of Detention | SEE CHAPTER ILHR 58 FOR SPECIFIC REQUIREMENTS | | | | | |
| Ch. ILHR 59 Hazardous Occupancies | A | DOC FF-1[6] | A or B | DOC FF-1[6] | A, B or C | DOC FF-1[6] |
| Ch. ILHR 60 Day Care Centers (20 Children or Less) | A or B | DOC FF-1[6] | A or B | DOC FF-1[6] | A, B or C | DOC FF-1[6] |
| Ch. ILHR 60 Day Care Centers (More than 20 Children) | A | II | A or B | II | A, B or C | DOC FF-1[6] |
| Ch. ILHR 62 Specialty Occupancies | A, B or C | DOC FF-[6] | A, B or C | DOC FF-1[6] | A, B or C | DOC FF-1[6] |

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/$cm^2$).

[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 1¾ 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/$cm^2$
Class II Interior Floor Finish — critical radiant flux — .22 watts/$cm^2$

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 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-resitive 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

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;

FP (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: FP

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.

FP (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 ¾ 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 precendence 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), renum. (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. FP

(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 recr. (6) (a), cr. (7), Register, February, 1991, No. 423, 4-1-91.

**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 interfer 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

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.

(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.

FP 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 ¼ 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 ⅜ 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 x ¼ inch, but not less than 1¼ x ¼ inch where bolts and separators are used except that platforms and treads constructed of flat bars on edge may be made of material 3/16 inch in thickness provided the material is galvanized after fabrication. Bars shall not be spaced more than 1¼ inches, center to center.

(b) ½ inch or ⅝ inch square bars with sharp edge up, not more than 1½ inches, center to center.

(c) ⅝ inch round bars, not more than 1½ 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 x ⅜ 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 ¼ 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 ⅞ inch square bars or 1½ x 1½ x ¼ 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 ⅞ 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 ⅜ 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

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 1½ x 1½ x ¼ inch angles or tees, or 1¼inch pipe; top rail not less than 1¼ x 1¼ x ¼ inch angle or equivalent; center rail not less than 1¼ x 5/16 flat bar or equivalent. All connections shall be such as to make the railing stiff; 2 bolts (⅜ inch or larger) shall be used at the foot of each post wherever possible, or at least one ½ 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 ⅜ 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 1¼ inch pipe, or not less than 2 x ⅜ inch flat bars, at least 16 inches apart in the clear. The rungs shall be not less than ½ inch square or ¾ 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 3½ 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 recr. 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). FP

(2) Standard fire escapes (s. ILHR 51.20) may be substituted for stairways to the extent of not more than ⅓ 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 accordian-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 occupies; 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 inspeciton 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 recr. 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.

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. **FP**

(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-

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 ⅓ 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.

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 ¼ 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, eff. 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.

| | 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), renum. (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. FP

History: 1-2-56; r. (1) and renum. (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

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).

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, 1985, 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 recr. (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:

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. FP

(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 traval 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.

**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. 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.

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.

(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.

(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 ¾ 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: FP

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.

**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 51.03 (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

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.

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82.
Register, March, 1992, No. 435

**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 |

[1]All 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 accidently 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.

(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 an 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. FP

(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 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.

(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.