

Chapter ILHR 52

GENERAL REQUIREMENTS

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Note: Chapter Ind 52 was renumbered to be Chapter ILHR 52 effective 1-1-84.

Subchapter I — Fire Prevention, Detection and Suppression for High Rise Buildings

ILHR 52.01 Fire prevention, detection and suppression for high rise buildings. (1) **AUTOMATIC FIRE SPRINKLER SYSTEM.** A complete automatic sprinkler system, as specified in s. ILHR 51.23, shall be provided in every building more than 60 feet in height, the initial construction of which is commenced after July 2, 1974. The requirements of this section shall not apply to open parking structures as defined in s. ILHR 62.10 (2).

(a) *Additions to existing buildings.* Building additions more than 60 feet in height shall have an automatic sprinkler system installed. The sprinkler protection shall be provided throughout the existing building unless the addition is separated from the existing building by a fire division wall as specified in s. ILHR 51.02 (13). The requirements of this section shall not apply to open parking structures as defined in s. ILHR 62.10 (2).

(b) *Substitute suppression systems.* When approved by the department, substitute automatic suppression systems may be used in lieu of a sprin-

kler 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.

Note: The department will accept design and installation in accordance with the latest edition of the national fire protection association standards for special extinguishing systems.

(c) *Alternate methods.* When approved by the department, alternate methods of fire prevention, detection and suppression may be provided in lieu of a complete automatic sprinkler system.

Note #1: The department will request a position statement regarding the proposed method to be submitted by the fire chief of the municipality wherein the building is located.

Note #2: The department will consider alternate methods of fire prevention, detection and suppression to include, but not limited to, fire-resistive construction, compartmentation, automatic detection systems, interior finish restriction, and partial sprinkler protection.

(2) **ADDITIONAL REQUIREMENTS FOR HIGH-RISE BUILDINGS.** The following requirements apply to all buildings more than 100 feet in height or having more than 10 stories. Open parking structures and buildings used for low hazard industrial processes, including the production and distribution of gas, steam or electric power, foundries and similar uses which require unusual heights to accommodate cranes, special machinery or equipment, are exempt from the provisions of this subsection.

(a) *Smoke control.* Natural or mechanical ventilation for the removal of products of combustion shall be provided in every story and shall consist of one or more of the following methods. Controlling devices may be automatic or manual as approved by the local fire department.

1. Panels or windows in the exterior wall which can be opened from a location other than the fire floor. Such venting facilities shall be provided at the rate of at least 20 square feet per 50 lineal feet of exterior wall in each story, and distributed around the perimeter at not more than 50-foot intervals. Such panels shall be clearly identified as required by the fire department.

2. Openable windows in habitable rooms of residential units.

3. When an automatic sprinkler system is installed in compliance with s. ILHR 51.23, the mechanical air handling equipment may be designed to assist smoke removal. Under fire conditions, the return and exhaust air shall be taken directly to the outside without recirculation to other sections of the building.

4. A mechanical ventilation system which will prevent the transfer of smoke from the fire source to other floors of the building. The design shall be substantiated by calculations or tests showing that a pressure differential of 0.10 inch of water column will be produced.

5. Any other design which will produce equivalent results.

(b) *Exit stairways.* 1. All stairways shall be pressurized. The pressure across each door shall be at least 0.15 but not more than 0.20 inch of water column with all doors closed. Pressurization shall be activated by the fire alarm system, the detection systems, and the sprinkler system. In lieu of pressurization, a smokeproof stair tower, as defined in s. ILHR 51.17, will be accepted.

Note: The department will accept alternate designs which will produce equivalent results.

2. All stairway doors which are to be locked from the stairway side shall have the capability of being unlocked without unlatching upon a signal from the central control station.

(c) *Elevators.* There shall be provided at least one elevator suitable for fire department access to any floor. If the building is not provided with an approved automatic sprinkler system, the elevator lobby at each level shall be separated from the remainder of the building by an effective smoke barrier.

Note: Refer to ch. Ind 4 for additional requirements.

(d) *Fire alarm and detection system.* 1. A manual fire alarm box shall be located adjacent to exit doors into stairway shafts and in every elevator lobby.

2. An approved system which will provide for automatic detection of products of combustion other than heat shall be installed in every air-handling equipment room, unless sprinklered, and in the return air portion of every air conditioning and mechanical ventilation system. Approved heat detectors may be installed in boiler rooms and furnace rooms in lieu of product of combustion detectors.

a. Detectors shall be located in the main return air and supply air ducts of each ventilation system and at each opening into a vertical return air shaft or duct.

b. The detectors shall actuate an alarm or signaling system and shut down the ventilation system except where automatic smoke control is incorporated in the system.

3. The manual alarm and automatic detection system shall conform to the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16 and one of the following standards:

a. Standard for Central Station Protective Signaling Systems, NFPA No. 71;

b. Standard for Auxiliary Protective Signaling Systems, NFPA No. 72B;

c. Standard for Remote Station Protective Signaling Systems, NFPA No. 72C;

d. Standard for Proprietary Protective Signaling Systems, NFPA No. 72D.

4. Detectors shall conform to the Standard for Automatic Fire Detectors, NFPA No. 72E.

(e) *Alarm and communication systems.* The following alarm and communication systems shall be provided. The systems shall be supervised and exposed wiring shall be encased in a metal conduit.

1. Voice alarm system. The detection system, sprinkler water flow device and the fire alarm system shall actuate a prerecorded message or voice alarm capable of being operated from the central control station on a general as well as a selective basis to the area involved. The alarm shall be designed to be heard by all occupants within the building or designated portions.

2. Voice communication system. There shall be a voice communication system between the central control station and the following areas:

Note: The department will accept systems installed in accordance with the Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems for Watchmen, Fire Alarm and Supervisory Service, NFPA No. 72A.

a. Elevators, elevator lobbies, in stairways at every fifth floor, and all manual fire alarm boxes (2-way communication system);

b. Every office area exceeding 1,000 square feet in area (one-way address system); and

c. Each dwelling unit and hotel guest room (one-way address system).

3. Fire department communication system. A system providing 2-way communication shall be provided at all floor levels, stairways, the central control station, and other locations required by the fire department.

a. The system shall be designed so the fire department communication system will override the other communication systems.

b. Wiring shall be arranged so that open circuits or short circuits on individual floors will not interfere with communications on another floor.

4. Combined system. When approved by the local fire department, the fire department communication system may be combined with the voice communication system and the voice alarm system.

(f) *Central control station.* A central control station for fire department operations shall be provided in a location approved by the fire department. It shall contain the voice communication systems panel; fire detection and alarm system panels; status indicators and controls for elevators, smoke venting and air handling systems; controls for unlocking stairway doors; a public telephone; sprinkler valve and water flow detectors; and standby power controls. All fire alarm and water flow signals shall be transmitted directly to the systems indicated in s. ILHR 52.01 (2) (d) 3.

(g) *Standby power and light.* An approved permanently installed standby power generating system shall be provided. The system shall be equipped with suitable means for automatically starting the generator set upon failure of the normal electrical service and for automatic transfer and operation of the required electrical functions at full power within 60 seconds of such normal service failure. System supervision with manual start and transfer features shall be provided at the central control station.

1. An on-premise fuel supply sufficient for not less than 2 hours full demand operation of the system shall be provided.

2. The power requirement shall be determined so as to provide service to, but not limited to the following:

a. Fire alarm system;

b. Exit and other emergency lighting;

c. Fire protection equipment;

Note: Standby power to service fire pumps may be omitted if approved by the local fire department.

- d. Mechanical ventilation required by this section;
- e. Fire department elevator; and
- f. Communication systems.

(h) *Maintenance.* All communication, fire prevention, detection and suppression systems required under this section shall be tested and maintained in an operable condition. All installed automatic sprinkler systems shall be maintained pursuant to NFPA No. 13A — Standard for the Inspection, Testing and Maintenance of Sprinkler Systems. A copy of the test 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 life safety systems are shut down or impaired and when placed back in service. The owner shall arrange for immediate and continual servicing or repair of the communication, fire prevention, detection and suppression systems until they are placed back in operation.

(i) *Floor level identification.* Each floor level or story shall be identified as to its number or name. Identification signs shall be posted in all elevator lobbies and in all required exit stairways.

History: Emerg. cr. eff. 1-1-75; cr. (1), Register, April, 1975, No. 232, eff. 5-1-75; cr. (2), Register, April, 1975, No. 232, eff. 1-1-76; (2), eff. 1-1-77; am. (2), Register, December, 1976, No. 252, eff. 1-1-77; am. (2) (d) 2. a. and cr. (2) (i), Register, December, 1977, No. 264, eff. 1-1-78; am. (1) (intro.), (a), (2) (intro.) and (2) (e) 2. a., Register, December, 1978, No. 276, eff. 1-1-79; am. (2) (h), Register, December, 1981, No. 312, eff. 1-1-82; am. (2) (h), Register, June, 1983, No. 330, eff. 7-1-83; emerg. am. (2) (h), eff. 9-6-86; am. (2) (h), Register, November, 1986, No. 371, eff. 12-1-86.

Subchapter II — Automatic Fire Sprinkler Systems for Low Rise Buildings

ILHR 52.011 Purpose, scope and application. (1) **GENERAL.** Pursuant to s. 101.14 (4) (a), (c) and (g), Stats., created by 1983 Wisconsin Act 295, this subchapter establishes automatic fire sprinkler system requirements for buildings under 60 feet in height which are used as public buildings or places of employment.

(2) **GENERAL REQUIREMENT.** Except as provided in sub. (3), automatic fire sprinkler systems shall be installed in the rooms, areas, locations, and building occupancies as specified in ss. ILHR 52.012 and 52.013.

Note: Section 4-4.4.1 of NFPA 13 states: "All concealed spaces enclosed wholly or partially by exposed combustible construction shall be protected by sprinklers." The section also listed exceptions to the rule. Buildings "completely protected" by automatic fire sprinkler systems must comply with this and related sections of NFPA 13.

(3) **ALTERNATE METHODS.** When approved by the department through the petition for variance process, alternate methods of fire protection, detection or suppression providing an equivalent degree of life safety protection may be provided.

Note: See s. ILHR 50.25 for the procedure used for submitting a petition for variance to an administrative rule.

(4) **SYSTEM DEFINITION AND STANDARD.** The automatic fire sprinkler systems specified in this subchapter shall conform to the definition specified in s. ILHR 51.01 (7a) and shall comply with the requirements speci-

fied in standards listed in ss. ILHR 51.27 (7) (b), (c), (cm), (d), (e), (f), (r) and (s).

Note #1: The definition of the term "automatic fire sprinkler system" in s. ILHR 51.01 (7a) is taken from s. 145.01 (2), Stats.

Note #2: See s. A52.011 of Appendix A for additional information pertaining to fire hazard classifications, building usage, and occupancy.

(5) **AREA SEPARATION WALLS.** (a) Buildings having an area exceeding the area limitations specified in s. ILHR 52.013, may be constructed without complete automatic fire sprinkler systems provided the building is divided into areas less than the specified area limitations by at least 2-hour rated vertical fire separation walls. The fire separation wall shall extend from the foundation to the underside of the roof deck.

1. Structural framing members may continue through or over the separation wall provided the framing and supporting elements are of noncombustible or one-hour fire-resistive combustible construction.

2. All openings in the separation wall shall be protected by fire-resistive door assemblies as specified in s. ILHR 51.047.

(b) Where additions to buildings result in the area of the entire building exceeding the area limitations specified in s. ILHR 52.013, one of the following conditions shall apply:

1. The existing building and the building addition shall be completely protected by an automatic fire sprinkler system;

2. The building addition shall be separated from the existing building by a 2-hour rated vertical fire separation wall. If the area of the building addition exceeds the area limitations specified in s. ILHR 52.013, the building addition shall be completely protected by an automatic fire sprinkler system or the building addition shall be divided with 2-hour rated vertical fire separation walls as specified in par. (a); or

3. The existing building and the building addition shall be divided by 2-hour rated vertical fire separation walls as specified in par. (a).

(6) **MULTIPLE USE BUILDINGS.** Where a building contains multiple occupancies or use areas and one occupancy or use area is required by s. ILHR 52.013 to be protected by an automatic fire sprinkler system, one of the following conditions shall apply:

(a) The occupancy or use area protected by the automatic fire sprinkler system shall be separated from the unprotected areas by at least 1-hour fire-resistive rated construction; or

(b) The entire building shall be protected by an automatic fire sprinkler system.

Note: See ss. ILHR 55.05 and 59.22 for occupancy separation requirements mandating fire-resistive separations of more than 1-hour rating.

(7) **SEPARATION OF AREAS PROTECTED BY A PARTIAL AUTOMATIC FIRE SPRINKLER SYSTEM.** Where the provisions of ss. ILHR 52.012 require the protection of an automatic fire sprinkler system, the protected area or room shall be enclosed with construction assemblies as specified in chs.

ILHR 54 to 62 and as designated in Table 51.03-A for the class of construction.

Note: This rule is intended to require an effective fire barrier between those portions of the building protected by the automatic fire sprinkler system and the adjoining unprotected portions. The fire barrier is not required to be of fire-resistive construction unless required for the occupancy, use or class of construction.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.012 Individual room, limited area and partial automatic fire sprinkler systems. The rooms or areas within buildings as specified in subs. (1) to (5) shall be protected by an automatic fire sprinkler system.

(1) **WINDOWLESS FLOOR LEVELS.** (a) Except as provided in pars. (b) and (c), automatic fire sprinkler system protection shall be provided in all basements and floor levels where openings as specified in s. ILHR 52.02 (2) (a) are not provided.

(b) Automatic fire sprinkler system protection need not be provided in the following windowless floor level applications:

1. Windowless floor levels of 2500 square feet or less in total area and equipped with an approved smoke detection system which is:

a. Directly and permanently wired to a proper unswitched circuit; and

b. Interconnected to the building manual fire alarm system. If the building does not have a manual fire alarm system, the smoke detection system shall be capable of sounding an audible alarm which can be heard in all occupied areas of the building.

2. Communication equipment rooms separated from the remainder of the building by at least one-hour fire resistive construction and the room is equipped with an approved automatic fire detection and alarm system;

3. Windowless floor levels in ch. ILHR 54 occupancies classified as low hazard and not exceeding 3000 square feet in area;

4. Windowless floor levels within individual living units of ch. ILHR 57 Occupancies;

5. Interior balconies and open mezzanine floors; and

6. Windowless floor levels in hospitals and nursing homes.

Note: See chs. ILHR 58 and HSS 124 and 132 for additional requirements.

(c) One-story buildings with no floor levels below the first floor need not be provided with exterior wall openings other than the required exits. Except as provided in par. (b), enclosed mezzanine floor levels shall be protected by an automatic fire sprinkler system or provided with exterior wall openings.

(2) **LAUNDRY AND TRASH COLLECTION ROOMS AND CHUTES.** Automatic fire sprinkler system protection shall be provided in all laundry and trash chutes and terminal rooms. Automatic fire sprinklers shall be installed at the top of the chute and at alternate floor levels.

(3) **STORAGE AREAS.** (a) Except as provided in par. (b), automatic fire sprinkler system protection shall be provided in storage areas exceeding 100 square feet in area and located in ch. ILHR 55, 56, and 57 occupancies. The areas of individual adjacent storage areas shall be considered

cumulatively unless each storage area is separated from the adjacent area by at least 30 minute fire resistive rated construction with openings protected by 20 minute rated fire doors.

(b) Automatic fire sprinkler system protection need not be provided in the following storage area applications:

1. Storage areas not exceeding 1500 square feet in area which are separated from the remainder of the building by at least one-hour fire resistive construction and the area is equipped with an approved smoke detection system, which is:

a. Directly and permanently wired to a proper unswitched circuit; and

b. Interconnected with the building manual fire alarm system. If the building does not have a manual fire alarm system, the smoke detection system shall be capable of sounding an audible alarm which can be heard in all occupied areas of the building; and

2. Storage areas located within individual living units of ch. ILHR 57 occupancies.

(4) **STAGE AREAS REQUIRING PROSCENIUM SEPARATIONS.** Automatic fire sprinkler system protection shall be provided for all stage areas requiring proscenium separations within or behind the proscenium separation as follows:

(a) Over the stage;

(b) Under the stage gridiron with side wall sprinkler heads rated at 135° F. having heat baffle plates. The heads shall be installed around the entire perimeter of the stage, except above the proscenium opening, at points not more than 30 inches below the gridiron, nor more than 6 inches below the baffle plate;

(c) Under all fly galleries;

(d) Under the stage;

(e) In all basements, workrooms, dressing rooms, store rooms and property rooms; and

(f) In toilet, lounge and smoking rooms.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.013 Specified applications by occupancy or use. Except as provided in s. ILHR 52.011 (5), a complete automatic fire sprinkler system shall be installed as specified in the following occupancies:

(1) **MERCANTILE OCCUPANCIES.** (a) Except as provided in par. (b), in mercantile occupancies where the area exceeds 15,000 sq. ft. per floor or 30,000 sq. ft. total area of all floors; or the height exceeds 3 stories;

(b) Mercantile occupancies without complete automatic fire sprinkler protection may be constructed up to the areas permitted in Table 54.01-1, but not exceeding 20,000 sq. ft. per floor provided the following conditions are satisfied:

1. The building is completely equipped with an automatic smoke detection system monitored by a fire alarm system company, proprietary or remote station service;

2. The distance to an exit does not exceed 100 feet; and

3. Street access for fire fighting vehicles is provided on at least 50% of the building perimeter.

(2) EXHIBITION ROOMS. In rooms having more than 12,000 sq. ft. of floor area which can be used for exhibition or display purposes.

(3) LIBRARIES AND MUSEUMS. In libraries and museums either of which exceed 15,000 sq. ft. area per floor.

(4) RESTAURANTS, NIGHT CLUBS AND DANCE HALLS. (a) In restaurants where the floor area exceeds 12,000 sq. ft. or where the capacity is more than 1,000 persons.

(b) 1. In buildings with rooms primarily used for dance halls or entertaining occupants who are drinking or dining and unseparated accessory uses where the total area exceeds 5,000 sq. ft. or where the capacity is more than 300 persons.

2. The area of accessory rooms such as but not limited to kitchens, storage rooms and other use areas shall be included unless the accessory rooms are separated from the remainder of the building by at least one-hour fire-resistive construction.

(5) DETENTION AND CORRECTION FACILITIES. In all detention and correctional facilities with a resident population of 6 or more.

(6) STORAGE OCCUPANCIES. (a) 1. Except as provided in par. (b), in buildings having an area exceeding 20,000 sq. ft. and used for high-piled storage of moderate hazard contents as specified in subd. 2.

2. High-piled storage shall include moderate hazard combustible materials in closely packed piles more than 15 feet in height or moderate hazard combustible materials on pallets or in rack more than 12 feet in height.

(b) 1. The automatic fire sprinkler system protection may be limited to the storage area of the building only provided the storage area is separated from the remainder of the building by at least 2-hour fire-resistive construction.

2. Automatic fire sprinkler system protection need not be provided in freezer warehouses.

Note: See s. ILHR 54.01 (2) (c) for additional requirements.

(c) The automatic fire sprinkler protection required by this subsection shall be in accordance with NFPA Standards No. 231 — Standard for General Storage and No. 231C — Standard for Rack Storage of Materials.

Note: See s. A52.011 for additional information on classification of hazards.

(7) HIGH HAZARD BUILDINGS. (a) Except as provided in par. (b), an automatic fire sprinkler system shall be installed in all high hazard occupancies exceeding 3000 sq. ft. in floor area.

Note: See s. A52.011 of Appendix A for additional information regarding classification of hazards.

(b) When approved by the department, alternate types of fire protection or suppression systems as may be appropriate for the particular hazard may be provided.

Note: The department will request a position statement regarding the proposed method to be submitted by the Fire Chief of the municipality having jurisdiction.

History: Emerg. cr. eff. 9-6-86; cr. Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.015 Automatic fire sprinkler systems for low rise buildings. History: Cr. Register, June, 1983, No. 330, eff. 7-1-83; emerg. r. and recr. (4) and r. (5), eff. 10-10-83; am. (3) (a) 1. and 5., (h), r. (3) (b) 2. b., renum. (3) (b) 2. c. to be (3) (b) 2. b., r. and recr. (3) (c), (d), (j), (4) and (5), cr. (6), Register, February, 1984, No. 338, eff. 3-1-84; emerg. r., eff. 9-6-86; r. Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.02 Windows. (1) **NATURAL LIGHT.** (a) Except as provided in par. (b), every room in which one or more persons live, sleep, shall be lighted by a window or windows opening directly upon a street or alley, or upon a court on the same lot with the building.

1. The windows shall be so constructed and distributed as to afford light.

2. Every building more than 40 feet deep measuring at right angles to the windows, shall have windows on at least 2 sides of the building.

Note: For windows and other outdoor openings used for natural ventilation, see ss. ILHR 64.07, 57.13, 58.03, 58.45 and 60.13.

(b) 1. Windows shall not be required in storage rooms, factories, offices, mercantile facilities, educational facilities or areas where the nature of occupancy will not permit windows provided artificial lighting as specified in ch. Ind 19 is provided.

FP 2. Hotel and motel rooms and similar sleeping rooms in buildings accommodating transients need not be provided with openable windows provided the rooms have clear glazed panels facing naturally lighted pool or recreation areas. The rooms shall be provided with mechanical ventilation supplying at least 5 CFM of tempered outside air per occupant.

(2) **FIRE DEPARTMENT ACCESS OPENINGS.** (a) *Application.* Except as provided in s. ILHR 52.012 (1) (b) and (c), every basement or floor level either of which is not protected by an automatic fire sprinkler system shall be provided with at least 20 square feet of aggregate opening in each 50 lineal feet of exterior wall in the story or basement, on at least one side of the building.

Note: Openings 20 sq. ft. in area spaced 100 feet apart and no more than 50 feet from the end of a wall satisfy the intent of this subsection.

(b) *Dimensions.* Openings shall have minimum dimensions of not less than 22 inches by 42 inches. The bottom of the opening shall be not more than 48 inches above the floor.

(c) *Accessibility.* The openings shall be accessible to the fire department from the exterior and shall be unobstructed to allow fire-fighting and rescue operations.

1. a. A clear space not less than 5 feet in width measured perpendicular to the building wall shall be provided outside of access openings.

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b. A stairway or ramp to grade not less than 3 feet in width shall be provided where the bottom of the opening is more than 4 feet below grade.

2. An interior stairway may serve as basement access if the stairway leads directly to an exterior door and is separated at the first story with one-hour fire-resistive rated construction and protected openings. The stairway may not serve any floor level above the first story.

3. A skylight or hatch may serve as a basement access opening if a ladder or stairs from the floor below is provided.

4. Access openings shall be doors, windows, glazed panels or other panels readily identifiable and openable from the outside. Access panels requiring the use of a key, special tools or devices for opening will be permitted if approved by the fire department having jurisdiction.

5. The fire department access shall open into the general area of the floor being served, where an aisle or passageway leading to the opening can be maintained clear of obstructions.

Note: An opening located within a tenant storage cubicle is not acceptable.

(d) *Number of openings required.* Every story of a building more than 75 feet deep, measuring at right angles to the openings, shall have openings in that story on at least 2 sides of the building.

(e) *Locations.* Openings in the basement shall be located so any location in the basement is within 75 feet of an opening.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; r. and recr. (1) (a), Register, October, 1967, No. 142, eff. 11-1-67; am. (1) (a) Register, May, 1971, No. 185, eff. 6-1-71; r. and recr., Register, September, 1973, No. 213, eff. 10-1-73; cr. (1) (b), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr. Register, June, 1983, No. 330, eff. 7-1-83; r. and recr. (2), Register, February, 1984, No. 338, eff. 3-1-84; emerg. r. and recr. (2), eff. 9-6-86; r. and recr. (2), Register, November, 1986, No. 371, eff. 12-1-86.

ILHR 52.03 Window cleaning. (1) Where the tops of windows to be cleaned are more than 20 feet above the floor, ground, flat roof, balcony, or permanent platform, one of the following means shall be provided to protect the window cleaners.

(a) Approved attachments for window cleaner safety belts to which belts may be fastened at each end. The attachments shall be permanent devices that shall be firmly attached to the window frame, or to the building proper, and so designed that a standard safety belt may be attached thereto; or

(b) An approved portable platform that is projected through the window or supported from the ground, floor, roof or platform level, for the window cleaner to stand upon and that is designed, constructed, maintained and equipped with handrail and toeboard in compliance with the requirements of ch. Ind 1.

(c) A suspended scaffold, swinging scaffold, swinging chair scaffold, or boatswain's chair scaffold designed, constructed, equipped and maintained in compliance with the requirements of ch. Ind 35, or

(d) Other equally effective devices.

(e) Where the window consists of a fixed panel not more than 24 inches in width alongside a removable panel, the fixed panel may be cleaned by reaching through the opening of the removable panel. Where the window consists of a fixed panel between 2 removable panels, the fixed panel may be cleaned by reaching through the openings if such fixed panel is not more than 36 inches in width.

(2) For cleaning the insides of skylights (the highest parts of which are more than 20 feet above the floor; ground, balcony or permanent platform), to which access cannot be gained by any of the means described in s. Ind 1.16 (1), scaffolds as specified in ch. Ind 35 shall be provided.

(3) All equipment, including building parts and attachments, used in connection with window cleaning, shall be maintained in reasonably safe condition while in use and shall be inspected at least once each month while in use, and within 30 days before their use. It shall be the responsibility of the owner of the individual safety devices or equipment to inspect and maintain the devices or equipment belonging to the owner so that each will comply with the requirements of this section.

(4) Where the attachments specified in sub. (1) (a) are relied upon for compliance with the provisions sub. (1), the employer shall furnish or see that there is provided, an approved suitable safety belt for each employe while cleaning windows.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. (1) (a), (3) and (4), Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 52.04 Requirements for barrier-free environments. (1) SCOPE. The requirements of this section are intended to insure that all public buildings and places of employment shall be accessible and usable by all citizens, including those with functional limitations.

Note: Owners intending to utilize federal funds for buildings may have to comply with other requirements in addition to ILHR 52.04, such as the latest revised ANSI A 117.1, Specification for Making Buildings and Facilities Accessible To, and Usable By, the Physically Handicapped.

(2) **DEFINITIONS.** (a) *Access or accessible.* Access or accessible means the ability of a person with a functional limitation caused by impairments of sight, hearing, incoordination, perception, semiambulatory or nonambulatory disabilities to enter and leave a public building, circulate through a public building, and use the public toilet facilities without assistance. Functional limitations may require aids such as wheelchairs, crutches, braces or canes.

(b) *Primary floor.* A primary floor is one intended for use by the employes or patrons, or both. A floor used primarily for furnace room or storage areas, or both, is not considered a primary floor.

Note: If more than one floor meets the definition of a primary floor, and access is required only to one primary floor, the owner may designate which primary floor will be provided with accessibility.

(c) *Public entrance.* Any major access point to a building used for the purpose of entering the building and gaining access to a primary floor is

considered a public access. Entrances used only for service or maintenance purposes, or designated for emergency exit only, are not considered public entrances.

(3) **SITE REQUIREMENTS.** A means of access shall be provided from an ancillary parking facility, street or alley to the public entrance.

(a) *Parking spaces.* Where parking spaces are provided, accessible parking spaces, at least 12 feet wide, shall be provided and designated as specified in Table 52.04-A. Access ramps or curb ramps shall not be located in the accessible parking space or any other parking space.

Note: See Appendix for examples of curb ramp locations.

TABLE 52.04-A
Accessible Parking Spaces

TOTAL PARKING SPACES	REQUIRED NUMBER OF ACCESSIBLE SPACES
1 - 1,000	2% of total number of spaces with a minimum of one
Over 1,000	20 plus 1% for total number of spaces over 1,000

1. **Identification.** Exterior signs as specified in s. Trans 200.07, Wis. Adm. Code, shall identify all accessible parking spaces and shall direct persons from the accessible parking space to the accessible entrance.

Note: See Appendix A for a reprint of s. Trans 200.07, Wis. Adm. Code.

2. **Location.** All accessible parking spaces shall be located as close as possible to an accessible entrance via an accessible route. Parking spaces in a parking ramp shall be located as close as possible to the main entrance of the parking ramp, to an adjacent accessible public walk, or to an accessible elevator.

(b) *Curb ramps.* 1. Where accessible walks cross driveways, parking facilities, streets or alleys, curb ramps shall be used to provide a means of access.

2. The design and construction of curb ramps shall comply with the provisions of s. 66.616 (3) (a), Stats.

Note: See Appendix A for a reprint of s. 66.616 (3) (a), Stats.

3. Handrails shall not be required for curb ramps which overcome a difference in elevation of 8 inches or less.

4. Curb ramps shall be located to provide the shortest line of travel from the accessible parking space to the accessible public entrance.

(c) *Exterior walks.* Exterior walks are prepared surface, exterior pathways leading to or from a building and are on the same level as the adjacent ground. Exterior walks leading to accessible entrances shall comply with the following criteria:

1. Exterior walks shall have a slip-resistant surface and shall have a minimum width of 48 inches, of which not more than 4 inches on each side may be occupied by a handrail.

2. Gradients. Exterior walks shall have a gradient no more than 5% or 1:20;

3. Handrails. Handrails are not required at exterior walks, except on those sides where the adjacent terrain exceeds a 25% (1:4) downward slope away from the walk. Required handrails shall be at least 2 feet 8 inches high, with an intermediate parallel rail at mid-height; and

4. Rest Platforms. Rest platforms are not required at walks.

(d) *Exterior ramps.* Exterior ramps are sloping walks or sloping structures having a gradient greater than 5% (1:20) and which provide access to or from a building. Exterior ramps shall comply with the following criteria:

1. Width. Exterior ramps shall have a slip-resistant surface and shall have a minimum width of 48 inches, of which not more than 4 inches on each side may be occupied by a handrail;

2. Gradients. Exterior ramps shall not have gradients greater than 8.33% or 1:12 slope;

3. Handrails. Graspable handrails shall be provided as follows:

a. Location. 1) Ramps with a gradient greater than 5% (1:20), but less than 8.33% (1:12) shall have a handrail on one side of the ramp;

2) Ramps with a gradient of 8.33% (1:12) shall have handrails on each side of the ramp; and

3) Handrails shall be provided on those sides where the adjacent terrain exceeds a 25% (1:4) downward slope away from the ramp.

b. Height. Handrails shall be mounted so that the top of the handrail is located between 30 inches to 34 inches above the ramp surface.

c. Midrails. Open-sided ramps shall have an intermediate parallel rail located at mid-height between the handrail and the ramp surface.

d. The clear space between the handrail and any adjoining wall shall be between 1½ inches to 2 inches.

4. Clearance. a. Where exterior ramps are provided to accessible doorways, the floor on each side of the doorway shall be level for a distance of 5 feet from the door.

b. Exterior ramps shall have a level platform at least 5 feet long where they turn and at least 5 feet of level clearance at the bottom of the ramp.

5. Rest platforms. All exterior ramps longer than 30 feet in length shall have 5-foot long level platforms at a maximum of 30-foot intervals.

(e) *Communication between buildings.* Walks or enclosed passageways which connect 2 or more buildings and are intended for public use shall provide access to each building.

(4) **NEW CONSTRUCTION.** All new public buildings and places of employment shall be provided with access to a primary floor, interior circulation and toilet facilities in accordance with Table 52.04 and the requirements of sub. (4). All buildings with multiple uses shall comply with sub. (5).

Note: Access to all areas of the building is preferred, however the footnotes in Table 52.04 designate specific exemptions and requirements for access to the primary floor, interior circulation, and toilet facilities for the occupancies listed.

(a) *Access to the primary floor.* Access from the exterior grade to a primary floor, via a public entrance, shall be provided by means of ramps, grade-level entrances, or other means of access approved by the department.

(b)* *Interior circulation.* Access shall be provided to all areas of the building as specified in Table 52.04. Interior circulation between floor levels shall be accomplished as follows:

1. In any public building or place of employment, the following methods of interior circulation may be used:

- a. Ramps complying with s. ILHR 52.04 (7);
- b. Elevators complying with ch. ILHR 18;
- c. Vertical lifts complying with ch. ILHR 18; and
- d. Enclosed inclined wheelchair lifts complying with ch. ILHR 18.

2. The following lifts may be installed in new or existing places of worship and lodge halls of fraternal organizations as defined in ch. 614, Stats., if interior circulation between floor levels is not required by this section:

- a. Unenclosed inclined wheelchair lifts complying with ch. ILHR 18;
- b. Stairway chairlifts complying with ch. ILHR 18; and
- c. Residential-type elevators complying with ch. ILHR 18.

(c) *Toilet facilities.* Accessible toilet facilities shall be provided on a primary floor or accessible from a primary floor. Every floor which is accessible, and which is provided with required toilet facilities, shall be provided with accessible toilet facilities which comply with the requirements of sub. (8) and the following distribution:

1. Accessible water closets shall be provided at the rate of 10% of the total number of toilet facilities provided on each accessible floor, with a minimum of one for each sex; and

2. One accessible toilet room is required in buildings accommodating 10 or less employees and less than 25 patrons per s. ILHR 54.12 (1) (a) 1.

*See Appendix A for further explanatory material.

TABLE 52.04

REQUIREMENTS FOR NEW CONSTRUCTION

Occupancy and Type of Construction	Access to Primary Floor	Interior Circulation	Toilet Facilities
I. All public buildings and places of employment not listed in categories II-XII	Yes	Yes ¹	Yes
II. Government-owned buildings except those occupancies listed under V and IX D	Yes	Yes	Yes
III. Factories, office and mercantile buildings, and shopping malls	Yes	Yes ^{1, 2, 3}	Yes ^{4, 5}
IV. Theaters and assembly halls			
A. Churches (chs. ILHR 54 and 55) ..	Yes	Yes ^{1, 6}	Yes ⁷
B. Auditoriums, theaters, stadiums and permanent bleachers	Yes	Yes ^{1, 6}	Yes
C. Night clubs, bars, restaurants (chs. ILHR 54 and 55)	Yes	Yes ¹	Yes
D. Recreational facilities (chs. ILHR 54 & 55)	Yes	Yes ^{1, 8}	Yes
V. Schools and other places of instruction	Yes	Yes ^{1, 9}	Yes
VI. Libraries, museums and art galleries ..	Yes	Yes ¹	Yes
VII. Places of abode			
A. Residential living units with individual exterior entrances	Yes ¹⁰	Yes ¹¹	Yes ¹²
B. All other residential living units (apartment-type buildings)	Yes ¹³	Yes ¹⁴	Yes ¹²
C. Hotels and motels	Yes	Yes ¹⁵	Yes ¹⁶
D. Condominiums	Yes ¹⁷	Yes ¹⁸	Yes ¹²
VIII. Day care centers	Yes ¹⁹	Yes ^{1, 19}	Yes ¹⁹
IX. Health care facilities			
A. Hospitals	Yes ²⁰	Yes ²⁰	Yes ²⁰
B. Nursing homes	Yes ²⁰	Yes ²⁰	Yes ²⁰
C. Community-based residential facilities	Yes ²¹	Yes ²¹	Yes ²¹
D. Dental and medical clinics and offices	Yes	Yes ^{1, 22}	Yes
X. Places of detention	Yes	Yes ^{1, 23}	Yes
XI. Garage occupancies	Yes	Yes ¹	Yes
XII. Specialty occupancies			
A. Open parking structures	Yes ²⁴	Yes ²⁴	Yes ²⁴
XIII. Mechanical equipment rooms, maintenance equipment and other storage rooms, janitor closets, storage warehouses, saw and feed mills, motion picture booths, portable bleachers, steel mills, steel fabricating plants, slaughter houses, storage and truck docks and shipbuilding facilities and similar occupancies determined by the department	No	No	No

Note: Floors used entirely for storage or mechanical purposes need not be included in determining the total gross area.

Footnotes of Table 52.04:

¹ (a) All buildings. Access is not required to a mezzanine if duplicate facilities to those provided on the mezzanine are located on an accessible floor. Access is required to employe facil-

ties, including but not limited to lunch rooms, change rooms and locker rooms, required by s. ILHR 54.13.

(b) *Buildings having an area 20,000 square feet or less.* If the total gross area of the building including all floors, is 20,000 square feet or less, interior circulation is required to a primary floor and throughout at least 2/3 of that floor area. Access is required to any raised or depressed area of the primary floor containing the only facility of its kind.

(c) *Buildings having an area greater than 20,000 square feet.* If the total gross area of the building, including all floors, is greater than 20,000 square feet, interior circulation is required to all floors and to at least 2/3 of the total area of each floor. Access is required to any floor level containing the only facility of its kind.

² (a) Each tenant space shall be considered a separate building for determining requirements for interior circulation within each tenant space.

(b) When more than 50% of the tenant spaces are remodelled in an existing shopping mall, all public use areas shall be made accessible in accordance with s. ILHR 52.04 (3), (4) and (9).

³ In retail establishments providing fitting rooms, at least one fitting room shall be accessible.

⁴ If the required toilet facilities are not accessible in buildings accommodating 15 or less employees and 25 or less patrons, one additional accessible toilet room for both sexes shall be provided. That toilet facility shall be located on an accessible floor and shall contain one lavatory and one water closet. A privacy lock for the door shall be provided.

⁵ In enclosed shopping malls, toilet facilities provided within a tenant space less than 750 square feet in net area, are not required to be accessible, providing accessible public toilet facilities are provided in the mall. Toilet facilities provided in accordance with s. ILHR 54.2 (1) (b) shall be accessible.

⁶ Seating spaces, at the rate of 2% of the total capacity with a maximum of 50 seats shall be integrated throughout the seating plan.

One-half of the accessible seating spaces shall be designed for patrons using wheelchairs. The wheelchair space shall be level. Removable seats may be installed in these wheelchair spaces when these spaces are not required to accommodate wheelchair users. The other spaces shall be designed for patrons using braces, crutches, or similar aids.

Ramp details [s. ILHR 52.04 (7)] do not apply to the aisles in theater auditoriums.

⁷ In remodeled churches, a separate accessible toilet room for use by both sexes is acceptable if the toilet room is located on an accessible floor, contains one lavatory and one water closet, and is provided with a privacy lock.

⁸ In buildings containing recreational facilities, access shall be provided to 10% of the individual game areas including bowling alleys, tennis courts and similar areas, with a minimum of one individual game area. Access shall be provided to toilets, lounge areas, bar, dining areas and similar areas as specified in footnote #1. Access is not required to saunas, racquet ball courts, handball courts and locker rooms associated with these areas.

⁹ If the total gross area of the building including all floors is 20,000 square feet or less, access is required to a primary floor and to any other floors or floor levels that provide services or facilities that are not found on the accessible floor.

¹⁰ Access to a primary floor shall be provided to at least 10% of the living units, with a minimum of one living unit. In a complex of buildings, the accessible units shall be integrated throughout at least 50% of the buildings in the complex.

¹¹ Doors and corridors shall be designed for access and shall comply with s. ILHR 52.04 (9). Doors to walk-in closets shall be a minimum of 32 inches in width.

¹² Grab bars, special lavatories, water closets, mirrors, or special bathing facilities are not required.

¹³ Access shall be provided to a primary floor with living units. In a complex of buildings, access shall be provided to at least 50% of the buildings in the complex.

¹⁴ All doors and corridors within all living units located on the accessible floor shall be designed for access and shall comply with s. ILHR 52.04 (9). Doors to walk-in closets shall be a minimum of 32 inches in width. If laundry, storage, trash facilities, or similar areas, are provided in buildings with more than 20 living units per building, the laundry or storage facilities, or both, shall be accessible.

15 (a) *Number of accessible sleeping units.* 1. In a hotel or motel, or a hotel or motel complex providing meeting or conference room facilities, accessible sleeping units shall be provided at a rate of 10% of the total number of sleeping units, with a minimum of one.

2. In a hotel or motel, or a hotel or motel complex not providing meeting or conference room facilities, accessible sleeping units shall be provided at a rate of 5% of the total number of sleeping units, with a minimum of one.

(b) *Interior circulation.* All doors and corridors throughout the accessible sleeping units shall be designed for access and shall comply with s. ILHR 52.04(9). Doors to walk-in closets shall be a minimum of 32 inches in width.

(c) *Access requirements.* Access is required to all public use areas of the building or complex. In a complex of buildings with sleeping units, access shall be provided to at least 50% of the buildings in the complex.

16 Accessible bathtubs or showers shall be provided and shall comply with s. ILHR 52.04 (8) (h). Self-rising toilet seats and sliding-door tub enclosures are prohibited.

17 Condominiums, 2 stories or less in height, are exempt from the accessibility requirements relating to parking spaces, ramps and grade-level entrances.

18 All doors and corridors shall be designed for access and shall comply with s. ILHR 52.04 (9). Doors to walk-in closets shall be a minimum of 32 inches in width.

19 Access, interior circulation, and toilet facilities do not apply to a change of use.

20 See ss. ILHR 52.041 and 52.042 for additional requirements on accessibility.

21 For community-based residential facilities within the scope of ch. ILHR 61, see s. ILHR 61.18 for additional requirements; for community-based residential facilities within the scope of ch. ILHR 57, common-use areas and 10% of the sleeping rooms shall be accessible.

22 If the total gross area of the building including all floors is 20,000 square feet or less access is required to a primary floor and to any other floors or floor levels that provide services or facilities for the employees and the patients that are not found on the accessible floor.

23 (a) In penal institutions, 2% of the total number of required institutional living units shall be accessible. Vertical transportation between tiers of cells is not required.

(b) Access is required to all areas identified for use by the general public.

24 See s. ILHR 62.34 for additional requirements.

(5) **BUILDINGS WITH MULTIPLE USES.** (a) *Buildings greater than 20,000 square feet.* Multiple-use buildings with a total gross area greater than 20,000 square feet, including all floors, shall comply with the criteria established in Table 52.04 for each specific use. Interior circulation is required to and throughout at least $\frac{2}{3}$ of each specific use area.

(b) *Buildings of 20,000 square feet or less.* Multiple-use buildings with a total gross area of 20,000 square feet or less, including all floors, shall be provided with a means of access to and throughout at least $\frac{2}{3}$ of the total area of the primary floor and to the toilet facilities on the primary floor. Government-owned buildings and dental and medical clinics and offices shall comply with the criteria established in Table 52.04 for each specific use.

Note: Floors used entirely for storage or mechanical purposes need not be included in determining the total gross area.

(6) **ADDITIONS, REMODELED BUILDINGS, AND CHANGE OF USE.** All existing public buildings or places of employment, and all additions, shall be provided with access to a primary floor, interior circulation and toilet facilities in accordance with the following:

(a) *More than 50% remodeled or added.* If more than 50% of the gross interior area of a building is remodeled, added to or both, the entire building shall comply with all applicable requirements of s. ILHR 52.04.

(b) *25% to 50% remodeled or added.* If 25% to 50% of the gross interior area of a building is remodeled, added to or both, that part of the building which is remodeled, added to or both shall be provided with the requirements of Table 52.04 and sub. (4).

(c) *Less than 25% remodeled or added.* If less than 25% of the gross interior area of a building is remodeled, added to or both, the requirements of Table 52.04 and sub. (4) need not be provided unless the remodeling or addition involves an entrance or exit or toilet facilities in which case the entrance or exit or toilet facility shall comply with sub. (4). Additions, larger than 20,000 square feet gross area, shall comply with Table 52.04 and subs. (3), (4) and (9) regardless of the percent of floor area of the entire building.

(d) *Toilet facilities in remodeled buildings.* If an existing building having passenger elevators is remodeled in accordance with the percentages above, accessible toilet room facilities for each sex shall be provided to serve each 5 floors, or fraction thereof, and shall comply with the requirements of sub. (8);

(e) *Change of use.* If the use of an existing building is changed to a new use and the building undergoes physical remodeling, the building shall comply with the percentages established in sub. (6);

(f) *Remodeling in stages.* The percentage requirements established in this subsection shall apply to the accumulative sum of any remodeling or additions, or both, undertaken after May 15, 1974.

(7) **INTERIOR RAMPS.** Interior ramps are sloped floor surfaces that connect different floor levels. Interior ramps shall comply with the following criteria:

(a) *Width.* Interior ramps shall have a slip-resistant surface and shall have a minimum width of 36 inches, measured between handrails.

(b) *Slope.* 1. "New construction". In new buildings, interior ramps shall not have a slope greater than one foot of rise in 12 feet of run.

2. "Existing construction". In existing buildings, interior ramps with a slope of one foot of rise in 8 feet of run may be used to overcome a total height not greater than 2 feet when the floor area does not permit a 1:12 ramp.

(c) *Handrails.* Except as provided in subd. 5., graspable handrails shall be provided as follows:

1. Location. a. Interior ramps with a gradient greater than 5% (1:20), but less than 8.33% (1:12) shall have a handrail on one side of the interior ramp;

b. Interior ramps with a gradient of 8.33% (1:12) or greater shall have handrails on each side of the ramp; and

c. Handrails are not required on interior ramps where the gradient is less than 5% (1:20).

2. Height. Handrails shall be mounted so that the top of the handrail is located between 30 inches to 34 inches above the ramp surface.

3. Guardrails. Open-sided ramps shall have an intermediate parallel guardrail located at mid-height between the handrail and the ramp surface.

4. The clear space between the handrail and any adjoining wall shall be between 1½ inches to 2 inches.

5. One handrail may be provided for ramps located in existing corridors or hallways having a minimum width of 36 inches.

(d) *Clearance.* 1. Where interior ramps are provided to accessible doorways, the floor on each side of the doorway shall be level for a distance of 5 feet from the door.

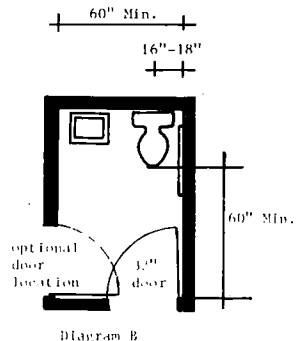
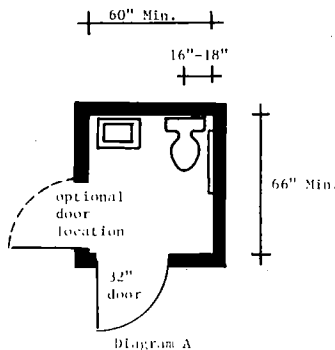
2. Interior ramps shall have a level platform at least 5 feet long where the ramps turn and at least 5 feet of level clearance at the bottom of the ramp.

(e) *Rest platforms.* 1. Interior ramps with a gradient greater than 5% (1:20) shall have a 5-foot long level platform at a maximum of 30-foot intervals.

2. Rest platforms are not required on interior ramps where the slope is less than one foot of rise in 20 feet of run.

(8)* **TOILET FACILITY DETAILS.** (a) *Accessible toilet rooms and compartments.* Accessible toilet rooms and toilet compartments shall be sized to provide ease of access, usability and uninterrupted mobility. Fixtures, doors, and other obstructions shall be arranged to ensure accessibility.

(b) *Single-fixture toilet rooms.* Single-fixture toilet rooms containing one water closet and one lavatory shall be designed to provide the minimum space requirements as shown in diagram A, diagram B, or as approved by the department.



(c) *Water closet compartments.* Accessible water closet compartments shall be designed in accordance with the minimum design standards as established in Table 52.04-B, or as approved by the department. Suf-

*See Appendix A for further explanatory material.

cient clearance must be maintained to permit the door to the toilet room compartment to open at least 95°.

Note: The water closet compartment specifications contained in Table 52.04-B do not apply to toilet rooms containing one water closet and one lavatory; or to bathrooms containing a water closet, a lavatory and a bathing facility. See the appendix for examples of accessible toilet room and bathroom arrangements.

TABLE 52.04-B

Compartment Size ¹ Width/Length	Door Location	Minimum ¹ Door Size	Water Closet Location	Grab Bar Location
36" x 78"	Front entrance	32"	Centered	Each side of WC
36" x 78"	Side entrance	36"	Centered	Each side of WC
54" x 57"	Front entrance (Door shall not align with water closet)	32"	Offset ^{2 3}	Wall closest to WC and wall behind WC
42" x 78"	Side entrance	36"	Centered	Each side of WC
48" x 72"	Side entrance	32"	Offset ^{2 3}	Wall closest to WC and wall behind WC

¹ See Figure 52.04-1 for additional rules regarding door and corridor dimensions.

² The 54" x 57" compartment is preferred for use by the physically disabled.

³ Water closet shall be offset 16 to 18 inches measuring from center line of water closet to wall.

(d) *Grab bars.* 1. Grab bar loads. Each grab bar shall be designed and anchored to support a weight of at least 250 pounds, applied at the bar.

2. Diameter. The grab bars shall have a smooth finish, with an approximately outside diameter between one inch to 1½ inches, and with 1½ inches clearance between rail and wall.

3. Height. Grab bars shall be installed 33 inches to 36 inches above the floor and parallel to the floor.

Note: Grab bars located 16 inches above the water closet seat are preferred for use by people with physical disabilities.

4. Location. a. Grab bars shall be located as specified in Table 52.04-B.

b. In single fixture toilet rooms containing one water closet and one lavatory, one grab bar shall be located on the wall adjacent to the water closet and one behind the water closet.

(e) *Water closets.* The seat height of the water closets shall be 17 inches to 19 inches above the floor measured from the floor to the top of the seat.

(f) *Urinals.* Wall-hung urinals shall have an elongated rim and shall be mounted not more than 17 inches above the floor.

(g) *Lavatory.* At least one lavatory, mounted at a height which allows 29 inches clear space at the bottom of the apron and a maximum rim height of 34 inches, shall be provided.

Note: It is recommended that water supply controls be single lever controls and that exposed hot water pipes be insulated.

(h) *Mirror and towel dispensers.* At least one mirror and towel dispenser or hand dryer, when provided, shall be mounted not more than 40 inches above the floor.

Note: The department will accept toilet rooms, individual toilet compartments and grab bars as illustrated in the Appendix.

(i)* *Accessible bathing facilities.* 1. The bathtub shall be equipped with a hand shower with a flexible hose at least 6 feet in length. A seat of nonabsorbent material shall be provided and shall be mounted 17 to 20 inches above the floor of the bathtub. The seat may be folding, retractable or fixed, unless an alternate method, such as a lift, is provided. Grab bars shall be mounted on 2 sides of the bathtub and shall comply with the requirements of par. (d) 3. In detention or correctional facilities, 2 fixed shower heads may be provided in lieu of a hand shower with a flexible hose.

Note: Refer to ch. ILHR 82 — Design, Construction, Installation, Supervision and Inspection of Plumbing, for requirements pertaining to the plumbing system, including the use of vacuum breakers.

2. The shower shall be equipped with lever type control handles. A seat of nonabsorbent material shall be provided and located 17 to 20 inches from the floor of the shower. The seat may be folding, retractable or fixed. Grab bars shall be mounted on 2 sides of the shower and shall comply with the requirements of par. (d) 4. If a shower wheelchair is provided for use in the shower, the grab bars and seat are not required. The threshold to the shower shall be no more than 1/2-inch and the edges shall be beveled to provide a smooth, unbroken surface to accommodate a wheelchair.

(9) DOORS, CORRIDORS AND PLATFORMS. (a) *Doors and corridors.* All doors and corridors shall be designed to provide access and shall comply with the minimum design standards established in Figure 52.04-1, or as approved by the department.

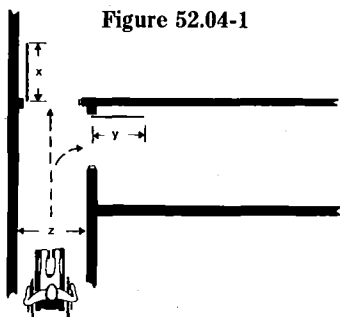


Figure 52.04-1

MINIMUM DOOR AND CORRIDOR DIMENSIONS			
CORRIDOR WIDTH	DOOR WIDTHS		
	Z*	X (Straight Run)	Y (90° Turn)
	36"	32"	36"
	38"	32"	36"
	40"	32"	34"
	42" and greater	32"	32"

* The corridor width (Z) shall be maintained for a distance of at least 5 feet from the edge of the door opening.

Note: These dimensions apply if a right or left turn is provided, or if the doors are hinged on the left or right side.

(b) *Door sizes.* The minimum door size to provide access shall be 32 inches in width. Doors shall provide minimum clear openings as specified in subds. 1.-3.

1. Doors 32 inches in width shall provide a minimum clear opening of 29 inches.

2. Doors 34 inches in width shall provide a minimum clear opening of 31 inches.

3. Doors 36 inches in width shall provide a minimum clear opening of 33 inches.

(c) *Door thresholds.* Thresholds at exterior doors shall not extend more than $\frac{3}{8}$ inch above the finished floor and exterior platform. Weather-stripped thresholds shall not exceed one inch above the finished floor and exterior platform, including the weather-stripping. All exterior thresholds shall be not less than 4 inches in width. Interior thresholds shall extend not more than $\frac{1}{2}$ inch above the finished floor or carpeting. All thresholds shall be beveled to provide smooth, unbroken surfaces.

(d) *Doors in series.* All doors in series, other than those which are electronically controlled, or located in individual living units, shall be arranged to provide a minimum distance of 6 feet 6 inches between the doors when closed.

Note #1: See Appendix for diagrams.

Note #2: Lever handles or door handles are recommended over conventional door knobs. Kickplates, 16 inches high, are recommended on the accessible side of doors. Automatic power-operated doors are recommended at entrances. Time-delay door closers are recommended at all accessible doors. The manual pull or push of a door is recommended not to exceed 8 pounds.

(e) *Platforms at exterior doors.* At least 18 inches of clear platform space shall be provided on the door knob side of all exterior doors. The platform shall have a side slope not greater than 2.5% ($\frac{1}{4}$ inch per foot) and shall be at least 4 feet in length when the door swings inward or 5 feet in length when the door swings outward.

(10) MISCELLANEOUS DETAILS. (a)* *Identification signs.* 1. International symbol for barrier-free environments. The international symbol for barrier-free environments shall identify all accessible entrances, toilet facilities, drinking fountains, telephones and parking spaces.

2. Location. The international symbol for barrier-free environments shall be placed at all entrances indicating the location of the nearest accessible entrances and accessible toilet facilities. The symbol at the exterior of the building shall be legible from adjacent streets, driveways or public walks.

Note: Also see s. Trans 200.07 for additional requirements.

(b)* *Wheelchair functions.* All 90°, 180°, 360° and S-turns shall be designed to provide ease of access, usability and uninterrupted mobility.

Note #1: The standard wheelchair dimensions are: length including footrest and feet, 48 inches; width, including hands and knuckles, 30 inches.

Note #2: The minimum space required to turn 90°, 180°, 360° and S-turns is illustrated in the Appendix.

*See Appendix A for further explanatory material.

(c) *Grates*. All openings in gratings that will be in the path of access shall not exceed $\frac{3}{8}$ -inch in width, and shall be installed perpendicular to the direction of travel. Spacers perpendicular to the grate and flush with the top of the grate shall be provided at not more than 18-inch intervals.

(d) *Public telephones*. If a public telephone is provided, it shall be accessible and installed with the height of the telephone coin slot not more than 54 inches above the floor, with the dial no more than 48 inches above the floor. In a multi-phone installation, a minimum of one telephone shall be accessible.

Note: An adjustable volume control should be provided in areas where such service is appropriate.

(11) **DRINKING FACILITIES**. Accessible drinking facilities shall be provided at the rate of 10% of the required drinking facilities as specified in chs. ILHR 54 to 62, with a minimum of one.

(a) *Drinking fountains and water coolers*. Drinking fountains and water coolers shall comply with the following:

1. Spout height. Spouts shall be not higher than 36 inches measured from the floor or ground surfaces to the spout outlet.

2. Spout location. The spouts of drinking fountains and water coolers shall be at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit. The spout shall provide a flow of water at least 4 inches high so as to allow the insertion of a cup or glass under the water flow.

3. Controls. Unit controls shall be front mounted or side mounted near the front edge.

Note: It is recommended to have lever-type controls.

4. Clearances. a. Wall and post-mounted cantilevered units shall have a clear knee space between the bottom of the apron and the floor or ground at least 27 inches high, 32 inches wide, and 17 inches to 19 inches deep.

b. Free-standing or built-in units not having a clear space under them shall have a clear floor space at least 36 inches by 48 inches that allows a person in a wheelchair to make a parallel approach to the unit.

5. Alcoves. Water fountains and water coolers shall be located completely within alcoves, or positioned so as not to encroach into pedestrian walk-ways. Alcoves shall be not less than 32 inches in width and 18 inches in depth.

Note: See Appendix for drawings of accessible water fountains and water coolers.

(b) *Drinking facilities provided with individual cups*. Drinking fountains using individual cups at a potable water source shall comply with sub. (8) for accessible lavatories and the individual cups and cup dispenser shall be accessible and located not more than 40 inches above the floor.

History: Cr. Register, December, 1974, No. 228, eff. 1-1-75; r. and recr. (3) (b), (4), (5) and (9) (a) and (b), am. (6), (7) (a), (7) (e), (8) (c) and (d), r. (9) (d) 3., Register, December, 1975, No. 240, eff. 1-1-76; am. table, (4) (c) 2 and (6) (e), Register, December, 1976, No. 252, eff. 1-1-77; cr. (2) (b) and (c), (3) (a) 3, am. (3) (b) (intro.), (4) (b) and (c) 1, (5), (7) (a), (c) and (e), (8) (b) and (9) (a) 1 and 2, r. and recr. (8) (b), Register, December, 1977, No. 264, eff. 1-1-78; am. (4) (c) 2., (5) (b), (6) (a) to (c), (7) (a) and (8) (c), Register, December, 1978, No. 276, eff.

1-1-79; am. (4) table, (5) (b), (9) (a) 1., (9) (c) 1. and 2., r. and recr. (3) and (8), cr. (9) (a) 3., Register, January, 1980, No. 289, eff. 2-1-80; cr. (8) (h), Register, December, 1981, No. 312, eff. 1-1-82; am. (8) (e), Register, October, 1982, No. 322, eff. 11-1-82; r. and recr. Table 52.04, (3), (6) (c), (7) and (9), am. (4) (b), (8) (c) and (8) (h) 1., cr. (10), Register, December, 1983, No. 336, eff. 1-1-84; am. (3) (a) (intro) and 2., (3) (c) 1. and (d) 1., (6) (a), (7) (a), Table 52.04-B and (8) (e), r. and recr. (3) (d) 3., Table 52.04-A, (7) (c), (8) (d) and (10) (d), renum. (8) (f) to (h) to be (8) (g) to (i), cr. (8) (f) and (11), r. (10) (e), Register, August, 1985, No. 356, eff. 1-1-86; reprinted to correct error in (11) (a) 3., Register, May, 1988, No. 389; r. and recr. (4) (b), Register, August, 1988, No. 392, eff. 9-1-88.

ILHR 52.041 Health care facilities — new construction. All new health care facilities shall be provided with access to a primary floor, interior circulation and toilet facilities in accordance with s. ILHR 52.04 and the following requirements:

(1) **ACCESSIBLE PATIENT TOILET FACILITIES.** Accessible patient toilet facilities shall be provided in accordance with this section.

(a) *Individual toilet facilities.* Where individual toilet facilities are provided in patient sleeping rooms or contiguous to patient sleeping rooms, at least 20% of these toilet facilities shall be usable by the disabled and shall comply with s. ILHR 52.04 (8). The accessible toilet facilities shall be integrated throughout the patient sleeping room area.

(b) *Centrally located toilet facilities.* Central toilet facilities serving the patient sleeping rooms shall be usable by the disabled and shall comply with s. ILHR 52.04 (8).

(c) *Toilet rooms located in ancillary areas.* Toilet rooms serving ancillary areas such as, but not limited to, physical therapy, occupational therapy, x-ray and similar occupancies shall be accessible and comply with distribution requirements specified in s. ILHR 52.04 (4) (c).

(2) **ACCESSIBLE PATIENT BATHING FACILITIES.** Accessible patient bathing facilities shall be provided in accordance with the following:

(a) *Individual bathing facilities.* Where individual bathing facilities are provided in patient sleeping rooms or contiguous to patient sleeping rooms, at least 20% of these bathing facilities shall be usable by the disabled and shall comply with s. ILHR 52.04 (8). The accessible bathing facilities shall be integrated throughout the patient sleeping room area.

(b) *Centrally located bathing facilities.* Central bathing facilities serving the patient sleeping rooms shall be usable by the disabled and shall comply with s. ILHR 52.04 (8).

History: Cr. Register, December, 1981, No. 312, eff. 1-1-82; cr. (1) (c), Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 52.042 Existing health care facilities. (1) **ADDITIONS AND REMODELING.** Any addition to an existing health care facility or remodeling of an existing health care facility shall comply with the requirements specified in s. ILHR 52.04 (6) based on the percentage limitations and the requirements in this section.

(2) **TOILET AND BATHING FACILITIES.** Toilet and bathing facilities shall be provided in accordance with Table 52.042.

(a) *Additions.* Additions to existing health care facilities shall comply with s. ILHR 52.041.

(b) *Remodeling.* The remodeled or altered areas and portions of existing health care facilities shall comply with the requirements in Table 52.042.

TABLE 52.042
 TOILET AND BATHING FACILITIES

Remodeling of Existing Health Care Facilities	Gross Interior Area of Entire Existing Building		
	Less than 25%	25-50%	More than 50%
Remodeling of existing patient sleeping rooms.	Toilet and bathing facilities being remodeled shall be accessible and comply with s. ILHR 52.04 (8).	20% of the patient sleeping rooms being remodeled shall be provided with accessible toilet and bathing facilities and shall comply with s. ILHR 52.04 (8).	20% of the total number of patient sleeping rooms of the entire building shall be provided with accessible toilet and bathing facilities and shall comply with ss. ILHR 52.04 (8) and 52.041.
Remodeling of ancillary areas (such as surgery, labs or similar areas), but no physical remodeling, additions, or both, to patient sleeping rooms.	Toilet and bathing facilities being remodeled shall be accessible and comply with s. ILHR 52.04 (8).	At least one toilet facility and bathing facility per 50 patients, but not less than one toilet facility and bathing facility per nursing station shall be available to both sexes and shall be accessible from a public corridor or public area.	

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

ILHR 52.05 Size of courts. (1) In applying the following requirements, a building from 30 to 43 feet high shall be considered as having at least 3 stories, and each additional 13 feet shall be considered an additional story.

(2) Outer lot line courts shall be not less than 5 feet wide for a court 2 stories or less in height and 40 feet or less in length, measured from the lot line to the wall of the building. For each additional story in height, the width of such court shall be increased one foot; and for each additional 15 feet or fraction thereof in length, the width of such court shall be further increased one foot.

(3) Outer courts between wings or parts of the same building, or between different buildings on the same lot, shall be not less than 6 feet wide for a court 2 stories or less in height and 40 feet or less in length. For each additional story in height, the width of such court shall be increased one foot, and for each additional 10 feet or fraction thereof in length, the width of such court shall be further increased one foot.

(4) Where outer courts or outer lot line courts open at each end to a street or other open space not less than 15 feet wide, the above lengths may be doubled.

(5) Inner lot line courts one story high shall be not less than 5 feet wide and not less than 45 square feet in area. Inner lot line courts 2 stories high shall be not less than 6 feet wide and not less than 60 square feet in area. For every additional story, every such inner lot line court shall be increased by at least one lineal foot in length and one lineal foot in its width.

(6) Inner courts shall be not less than 10 feet in width nor less than 150 square feet in area for courts 2 stories or less in the height; and for every additional story every such inner court shall be increased by at least one lineal foot in its length and one lineal foot in its width.

(7) Courts shall not be covered by a roof or skylight but the entire required area shall be open and unobstructed from the bottom thereof to the sky. No fire escape or stairway shall be constructed in any court unless the court be enlarged proportionately.

(8) Walls of inner courts whose least horizontal dimension is less than one-fourth the height, shall be faced with material with a permanent white surface or shall be painted white at least every 2 years.

(9) No buildings shall be altered or enlarged to encroach upon space reserved under this code for light and air on the lots or parcels of ground on which such building is erected.

History: 1-2-56; am. (2) and (5), Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 52.06 Ventilation of courts. At the bottom of every shaft or inner court there shall be sufficient access to such shaft or court to enable it to be properly cleaned out. Every inner court which is required under s. ILHR 52.02 and which is more than one story in height, shall have an intake for fresh air, leading from the street or other open space. The area of such intake in square feet shall equal at least .002 of the number of cubic feet contained in the court, but such area need not be more than 50 square feet. Every intake shall be of not less than 2-hour fire-resistive construction and unless the intake is used as a passageway for persons, there shall be no openings into the same other than the inlet and outlet.

History: 1-2-56; am. Register, December, 1981, No. 312, eff. 1-1-82.

FP ILHR 52.07 Atriums. (1) **SCOPE.** (a) Except as provided in par. (b), all buildings fully protected by an automatic fire sprinkler system may have atriums complying with the provisions of this section.

(b) High hazard buildings may not have atriums.

Note: See s. A 52.015 for further information regarding the classification and listing of high hazard buildings.

(2) **MINIMUM OPENING AND AREA.** Atriums shall have a minimum opening and area as specified in Table 52.07-1.

Table 52.07-1
Atrium Opening and Area

Height in Floor Levels	Minimum Clear Opening ¹ (Ft.)	Minimum Area (Sq. Ft.)
3-4	20	400
5-7	30	900
8 or more	40	1,600

¹ The specified dimensions are the diameters of inscribed circles whose centers fall on a common axis for the full height of the atrium.

(3) **SMOKE CONTROL SYSTEM.** (a) *General.* A mechanically operated air-handling system shall be installed that will exhaust smoke either entering or developed within the atrium.

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(b) *Exhaust openings.* 1. Exhaust openings shall be located in the ceiling or in a smoke trap area immediately adjacent to the ceiling of the atrium.

2. The lowest level of the exhaust openings shall be located above the top of the highest portion of door openings into the atrium.

(c) *Supply openings.* Supply openings shall be sized to provide a minimum of 50 percent of the exhaust volume and shall be located with the bottom of the opening within 18 inches of the floor of the lowest level of the atrium.

(d) *Supply air.* 1. When the height of the atrium is 55 feet or less, supply air may be introduced by gravity, provided smoke control is accomplished.

2. When the height of the atrium is more than 55 feet, supply air shall be introduced mechanically from the floor of the atrium and be directed vertically toward the exhaust outlets.

3. In atriums over 55 feet in height or where tenant spaces above the second story are open to the atrium, supplemental supply air may be introduced at upper levels.

(e) *Systems activation and operation.* 1. The exhaust and supply system for the atrium shall operate automatically upon the actuation of either the automatic fire sprinkler system within the atrium or areas open to the atrium or by the actuation of 2 or more smoke detectors required by sub. (4), or both.

2. The exhaust and supply equipment shall also be manually operable by controls designed for fire department use.

3. The smoke-control system may be separate or integrated with other air-handling systems.

4. When the smoke-control mode is actuated, air-handling systems which would interfere with the smoke-control system shall be automatically shut down.

(f) *Smoke-control in spaces.* Spaces separated from the atrium but sharing a common wall shall be provided with a smoke-control system as follows:

1. The mechanical air-handling equipment for the tenant space may be designed to accomplish smoke removal;

2. Upon activation of the smoke detection or automatic fire sprinkler system within the space, the return and exhaust air shall be moved directly to the outside without recirculation to other sections of the building; and

3. The air handling system shall provide a minimum of 6 air changes per hour of exhaust air for the tenant space involved.

(g) *Sizing of smoke-control systems.* The atrium smoke-control system shall exhaust not less than the following quantities of air:

1. Atriums of 600,000 cubic feet or less. a. Except as provided in subpar. b., a minimum of 6 air changes per hour but not less than 40,000

CFM for atriums having a volume of 600,000 cubic feet or less including the volume of any levels not physically separated from the atrium.

b. A lesser rate of air movement shall be acceptable provided it can be shown by test that smoke will not migrate beyond the perimeter of the atrium.

2. Atriums greater than 600,000 cubic feet. A minimum of 4 air changes per hour for atriums having a volume greater than 600,000 cubic feet including the volume of any levels not physically separated from the atrium.

(4) SMOKE DETECTION SYSTEM. (a) 1. An interconnected smoke detection system which will automatically operate the atrium smoke-control system shall be installed at the perimeter and on the ceiling of the atrium and on the ceiling of each floor level that is open to the atrium.

2. Smoke detectors shall be located within 15 feet of the atrium on floor levels open to the atrium.

(b) Smoke detection systems and individual smoke detectors shall be located and installed in accordance with their listing from a nationally recognized testing laboratory and s. ILHR 51.245.

(5) ENCLOSURE OF ATRIUMS. (a) *General*. 1. Except as provided in subd. 2., atriums shall be separated from adjacent spaces by at least one-hour fire-resistive rated construction.

2. Open exit balconies are permitted within the atrium.

3. The separation between the adjacent space and the atrium as specified in subd. 1. may be omitted on a maximum of any 3 floor levels, provided the remaining floor levels are separated as specified in subd. 1.

(6) OPENINGS IN THE ATRIUM ENCLOSURE. (a) *Door openings*. 1. Except as provided in subd. 2., openings in the atrium enclosure shall be protected by at least ¾-hour, self-closing fire door assemblies as specified in s. ILHR 51.047.

2. The doors may be left open if equipped with an automatic closing device activated by products of combustion other than heat.

(b) *Fixed glazed openings*. Except as provided in subds. 1. and 2., fixed glazed openings shall be protected by at least ¾-hour fire window assemblies as specified in s. ILHR 51.048 and the total area of the openings shall not exceed 25% of the area of the common wall between the atrium and the room into which opening is provided.

1. In ch. ILHR 57 residential occupancies, openings may be unprotected when the floor area of each guest room or living unit does not exceed 1000 square feet and each guest room or living unit has an approved exit not entering the atrium.

2. In all occupancies other than ch. ILHR 57 residential occupancies, the tenant space may be separated from the atrium by a wired, tempered or laminated glass wall, in a gasketed frame so installed that the glazing system may deflect without breaking the glass before the automatic fire sprinkler system operates.

(7) **EXITING.** (a) *Exit distance.* When a required exit enters the atrium space, the travel distance from the doorway of the tenant space to an enclosed stairway, horizontal exit, exterior door or exit corridor shall not exceed 100 feet. The maximum allowable exit distance, as required by chs. ILHR 54 to 62 shall also be met.

(b) *Prohibitions.* Sleeping rooms of ch. ILHR 58 health care facilities shall not be permitted to have required exits through the atrium.

(c) Except as provided in ss. ILHR 54.08, 55.09 and 57.08, unenclosed stairs within the atrium may not serve as required exit stairs.

(8) **OCCUPANCY SEPARATIONS.** (a) Except as provided in par. (b), at least an ordinary occupancy separation, as specified in s. ILHR 51.08, shall be provided between different occupancies.

(b) The vertical portion of the occupancy separation adjacent to the atrium may be omitted between:

1. Chapter ILHR 54 office and sales areas and ch. ILHR 57 guest rooms and living units located on another level;

2. Chapter ILHR 55 assembly halls without a stage and having an occupant load of less than 300 persons and ch. ILHR 57 guest rooms and living units located on another level; and

3. Chapter ILHR 54 office and ch. ILHR 55 assembly halls without a stage and having an occupant load of less than 300 persons.

(9) **STANDBY POWER.** The smoke-control system for the atrium and the smoke-control system for the tenant space shall be provided with emergency standby power as specified in s. ILHR 16.32.

(10) **INTERIOR FINISHES.** The interior finish of walls and ceilings of the atrium and all unseparated tenant spaces as permitted in sub. (6) (b) 3. shall be Class A. No reduction in class shall be permitted for automatic fire sprinkler system protection.

(11) **ACCEPTANCE OF THE SMOKE-CONTROL SYSTEM.** Before occupancy, the smoke-control systems shall be tested in an approved manner and shall show compliance with the requirements of this section.

Note: See Appendix A for a reprint of an approved test procedure.

(12) **INSPECTION OF THE SMOKE-CONTROL SYSTEM.** (a) All operating parts of the smoke-control systems shall be tested by an approved inspection agency or by the owner or designated agent or the smoke control system shall be fully supervised.

(b) The tests shall be made every 3 months and a log of the tests shall be kept. Fully supervised smoke control systems shall be tested at least annually.

(c) The log shall be on the premises and available for examination by department personnel or authorized deputies of the department.

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

ILHR 52.19 Gas and oil lamps. (1) Gas and oil lamps shall not be used where electricity is available, except within living units of apartment buildings.

(2) Gas and oil lamps shall be placed at least 6 feet above the floor level, at least 6 inches from any combustible partition or wall, and at least 2 feet (measured from top of flame) below any combustible ceiling unless properly protected by a metal shield with at least 2 inches of air space above. Swinging brackets shall be provided with a guard or stop so that the light cannot come nearer to the partition or wall than one foot. In aisles and public passageways, every such light shall be protected by an incombustible guard unless the light is at least 7 feet above the floor. Gas and oil lights shall be kept at least 2 feet from any drape or window curtain.

(3) Every gas supply main shall have a service cock outside of the building, so placed and maintained that it can be shut off at any time without entering the building.

History: 1-2-56; am. (1), Register, September, 1973, No. 213, eff. 10-1-73.

FP **ILHR 52.20 Electrical work.** All electrical work shall conform to the requirements of the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16, of the department.

Note: For the design requirements for transformer vaults, see ch. E 450 of the Wisconsin State Electrical Code, Volume 2, ch. ILHR 16.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

FP **ILHR 52.21 Location and maintenance of exits.** Every exit mentioned in ss. ILHR 51.15 to 51.20, inclusive, shall lead to a street, alley or open court connected with a street. All such exits and all passageways leading to and from the same, shall be kept in good repair and unobstructed at all times.

History: 1-2-56; am., Register, January, 1980, No. 289, eff. 2-1-80.

FP **ILHR 52.22 Repairs.** Every building shall be kept in good repair and the roof shall be maintained to prevent leakage. All rainwater shall be so drained and conveyed to prevent dampness in the walls and ceilings.

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

FP **ILHR 52.23 Cleanliness.** Every building, including connecting yards, courts, passages, areas or alleys, shall be kept clean, and shall also be kept free from any accumulation of dirt, filth, rubbish, garbage, or other matter.

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

SANITATION REQUIREMENTS

ILHR 52.50 Toilet rooms. Every place of employment and public building shall have toilet rooms as provided in the occupancy classifications of this code, completely enclosed and so arranged as to ensure privacy, unless otherwise exempted.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; am. Register, December, 1976, No. 252, eff. 1-1-77.

ILHR 52.52 Sex designation. Where separate toilet rooms for each sex are required by this code, each toilet room shall be marked with regard to

the sex which uses it; words such as MEN or WOMEN, in letters not less than one inch high, or symbols may be used.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73; am. Register, December, 1976, No. 252, eff. 1-1-77.

ILHR 52.53 Location, light and ventilation. (1) Every toilet or bathroom shall be so located as to open to outside light and air, by windows or skylights opening directly upon a street, alley or court, except as provided in s. ILHR 52.54.

(2) The glass area for a toilet room containing one water closet or urinal shall be at least 4 square feet with at least 2 square feet openable.

(a) Bathrooms containing a water closet or urinal shall be considered as a toilet room.

(3) No toilet room shall have windows or ventilator openings in any elevator shaft or inner court that has windows of habitable rooms above.

(4) Every toilet room having more than one fixture including closets and urinals shall be ventilated in accordance with the provisions of s. ILHR 64.65, except that this requirement shall not apply to chemical or septic toilets which are installed in accordance with the provisions of the chemical toilet code or the septic toilet code issued by the department.

(a) The size of gravity vent ducts, if surmounted with effective siphon type hoods, may be determined as follows: $\frac{A \times 2}{300}$ = net cross sectional area of vent duct in square feet.

Where A = floor area in the toilet room in square feet.

History: 1-2-56; am. Register, December, 1962, No. 84, eff. 1-1-63; r. and recr. Register, October, 1967, No. 142, eff. 11-1-67; am. (3), Register, September, 1973, No. 213, eff. 10-1-73; am. (4) (intro.), Register, December, 1975, No. 240, eff. 1-1-76; am. (4), Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 52.54 Location without outside windows; when permitted. (1) SINGLE FIXTURE TOILET ROOMS AND BATHROOMS. (a) Except as provided in par. (b), windows may be omitted in bathrooms or toilet rooms having one water closet or urinal and lavatory or bathing facility where artificial light and either mechanical exhaust ventilation or an approved ductless air circulating and treatment device is provided.

(b) The use of ductless air circulating and treatment devices in taverns and restaurants is prohibited.

(2) MULTIPLE FIXTURE TOILET ROOMS. Toilet rooms with more than one fixture (water closet or urinal) will be permitted without windows if mechanical ventilation, in accordance with the requirements of s. ILHR 64.65, and artificial light are provided.

History: 1-2-56; r. and recr. Register, October, 1967, No. 142, eff. 11-1-67; am. Register, December, 1975, No. 240, eff. 1-1-76; r. and recr. Register, December, 1977, No. 264, eff. 1-1-78; am. (1), Register, December, 1983, No. 336, eff. 1-1-84.

ILHR 52.55 Artificial light. Every toilet room, except those within living units, shall be artificially lighted during the entire period that the building is occupied, wherever and whenever adequate natural light is not available, so that all parts of the room, especially the toilet compart-

ments, shall be provided with artificial light intensity of not less than 2.5 footcandles at the floor level.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73.

ILHR 52.56 Size. Every toilet room shall have at least 14 square feet of floor area with a minimum width of 3 feet, and at least 100 cubic feet of air space for each water-closet and each urinal in addition to the space required for lavatories if installed within the toilet room.

ILHR 52.57 Floor and base. Every toilet room, except those within living units of apartment buildings, shall have the entire floor and the side walls to a height of not less than 4 inches made waterproof with ceramic tile, terrazzo, painted concrete, marble slate, monolithic asphalt or other approved material impervious to water.

Note: This section is also intended to prohibit the use of wall registers within 4 inches of the floor, baseboard registers and floor registers.

History: 1-2-56; am. Register, September, 1973, No. 213, eff. 10-1-73; am. Register, December, 1981, No. 312, eff. 1-1-82.

ILHR 52.58 Walls and ceilings. (1) The walls and ceilings of every toilet room shall be completely covered with smooth non-absorbent material.

(2) The interior surface of walls and partitions shall be of light color to improve illumination and facilitate cleaning.

History: 1-2-56; r. and rec. Register, September, 1959, No. 45, eff. 10-1-59; am. (1), Register, December, 1977, No. 264, eff. 1-1-78.

ILHR 52.59 Enclosure of fixtures. (1) The fixtures (closets and urinals) in every toilet room shall be arranged to ensure privacy. Water-closets shall be enclosed with partitions. Urinals shall be placed against walls and arranged individually. Individual floor type urinals shall be placed against walls at least 7 feet 0 inches high.

(a) *Exception.* The above requirements need not apply to toilet rooms accommodating only a single closet or urinal.

(2) A space of 6 to 12 inches shall be left between the floor and the bottom of each partition. The top of the partition shall be from 5½ to 6 feet above the floor. Doors with the top 5½ to 6 feet above the floor, and the bottom 6 to 12 inches above the floor, shall be provided for all water-closet compartments. All partitions and doors shall be of material and finish required for walls and ceilings under s. ILHR 52.58.

(3) The water closet compartments in toilet rooms shall be not less than 30 inches in width, and shall be not less than 54 inches in depth with a clearance of not less than 24 inches between the fixture and the compartment door when closed except as specified in s. ILHR 52.04 (8). Compartment doors which are hung to swing inward shall clear the fixture not less than 2 inches.

(4) No admission fee shall be charged for the use of any toilet facility in a public building or place of employment. Key-locking of toilet rooms is

prohibited in all buildings except service stations and filling stations having exterior toilet room access.

Note: Section 116.085, Stats., prohibits charging a fee for the use of toilet facilities and imposes a fine of \$10 to \$50 for violations.

History: 1-2-56; am. (3) and cr. (4), Register, November, 1963, No. 95, eff. 12-1-63; am. (2), Register, February, 1974, No. 218, eff. 3-1-74; r. (4), Register, December, 1974, No. 228, eff. 1-1-75; am. (3), Register, December, 1975, No. 240, eff. 1-1-76; cr. (4), Register, December, 1976, No. 252, eff. 1-1-77; am. (1), Register, December, 1977, No. 264, eff. 1-1-78.

ILHR 52.60 Fixtures. (1) WATER CLOSETS. Only water closets of porcelain, vitreous china, stainless steel or other nonabsorbent materials shall be used. All water closets in public buildings and places of employment shall have elongated bowls and hinged, open-front seats without cover. Water closets in apartments, day care centers, individual executive offices, and sleeping units of hotels and motels may be of the round bowl type, provided with a hinged, closed-front seat, with or without cover. Water closets shall be equipped to limit the use of water to not more than 4 gallons per flush.

(2) **URINALS.** (a) *Stall type.* Stall-type urinals shall be set into the floor, and the floor shall be graded toward the fixture. Spaces between stall-type urinals, or urinals and sidewalls, shall be filled in flush with the front and top of the urinal with nonabsorbent material if the space is less than 12 inches.

(b) *Wall type.* Wall-hung urinals may be installed in all buildings except elementary schools (kindergarten through 8th grade).

Note #1: The definitions and general classifications for schools are found in s. 115.01, Stats.

Note #2: The department recommends that wall-hung urinals be installed at a height between 22 inches to 21 inches above the floor.

Note #3: See s. ILHR 52.04 (8) for additional requirements dealing with making wall-hung urinals accessible for people with disabilities.

(c) *Flushing devices.* The urinals shall be equipped with an effective flushing device which limits the use of water to not more than 1.5 gallons per urinal per flush.

(d) *Multiple urinals.* Batteries of urinals shall be spaced not less than 30 inches center-to-center. The center line of a single urinal shall be at least 16 inches from the nearest sidewall or partition.

(e) *Materials.* Only individual urinals of porcelain, vitreous china, stainless steel, or other nonabsorbent materials approved by the department shall be used.

(3) **HAND-WASHING AND DRYING FACILITIES.** Hand-washing facilities shall be provided in all places of employment and public buildings in accordance with the requirements of this subsection.

(a) *Lavatories.* Except as provided in sub. (6), lavatories shall be of an approved type and shall be provided with hot and cold running water. The faucets of such lavatories shall be of a type which limits the flow of water through the faucet, after the handle is released, to not more than one gallon. Lavatories in toilet rooms of private living units shall be equipped to limit the flow of water to not more than 3 gallons per minute. The lavatories may be equipped with a hot and cold regulating device. If a multiple-use lavatory is installed, 24 lineal inches of wash sink or 20

inches measured along the edge of a circular basin will be considered equivalent to one lavatory.

(b) *Hand-drying facilities.* Individual hand towels, sections of cloth or paper, or clean individual sections of continuous toweling, convenient to the lavatories, shall be provided. Hand-drying facilities shall be provided at the ratio of at least one unit for every 3 lavatories. Warm-air blowers may be substituted for up to one-half of the required hand-drying units. Warm-air blowers shall provide air at not less than 90° F, nor more than 140° F.

Note: The department will accept the qualified blowers listed by Underwriters' Laboratories, Inc.

(c) *Toilet soap.* Soap or similar cleansing agents shall be provided.

(d) *Receptacles.* Receptacles shall be provided for the disposal of used towels and other waste materials.

(4) **DRINKING FACILITIES.** Drinking facilities shall be provided in all buildings except in areas where food and drinks are served. Drinking facilities shall not be installed in toilet rooms, except in residential occupancies. Drinking fountains, coolers or individual cups at a potable water source may be provided. Common drinking cups are prohibited.

Note: Where running water is not available, a covered drinking water container, equipped with a faucet or bubbler, may be provided. The container should be cleaned and sanitized at frequent intervals.

(5) **BATHING FACILITIES.** Bathing facilities shall be provided for the specific occupancies outlined in the occupancy chapters of this code.

(a) All shower compartments, regardless of shape, shall have at a minimum finished interior of 900 square inches and shall be capable of encompassing a 30-inch circle. The minimum required area and dimension shall be measured at a height 24 inches above the top of the threshold and at a point tangent to its centerline. The minimum area and dimensions shall be maintained to a point 70 inches above the shower waste outlet with no protrusions other than the fixture valve or valves, showerheads, soap dishes and safety grab bars or rails. Each shower room or compartment shall be constructed of material impervious to moisture. The floor of the shower room or compartment shall be provided with a slip-resistant finish.

(b) *Hot and cold water.* Except as provided in sub. (6); bathing facilities shall be provided with hot and cold water and be equipped with a hot and cold water regulating device. The device shall be plainly marked. Supply or feed pipes to showers shall be placed overhead or protected to avoid the probability of a person coming in contact with the hot water pipes. Showers shall be equipped to limit the flow of water to not more than 3 gallons per minute per shower head.

(c) *Toilet soap and towels.* Employees who use showers shall be provided with soap or other appropriate cleansing agents and clean individual towels.

Note: See ch. ILHR 82 for special fixture requirements.

(6) **LAVATORIES, USE OF HOT OR TEMPERED WATER.** (a) Lavatories, wash fountains and shower heads which are not located in dwelling units or living units shall be supplied with either tempered water or hot water.

1. Tempered water shall be provided to lavatories, wash fountains and shower heads by means of tempering mixing valves.
2. No more than 4 lavatories which are located in the same room may be served by a single tempering mixing valve.
3. Only shower heads which are located in the same room may be served by a single tempering mixing valve.

(b) Lavatories located in park shelters and bath houses which are not open during the period from November 15 to March 15 and which are not places of employment shall not be required to be provided with hot water.

(c) Lavatories located in waysides which are not places of employment shall not be required to be provided with hot water.

Note: The exception of providing hot water under pars. (a) to (c) does not supercede the requirements of other state agencies for providing hot water.

History: 1-2-56; r. and recr., Register, September, 1959, No. 45, eff. 10-1-59; am. (1), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr., Register, December, 1974, No. 228, eff. 1-1-75; am. (1) and (2) (d), r. and recr. (2) (b), cr. (2) (f), (3), (4) and (5), Register, December, 1976, No. 252, eff. 1-1-77; am. (2) (c), Register, May, 1978, No. 269, eff. 6-1-78; am. (1), (2) (c), (3) (a) and (5) (b), Register, January, 1980, No. 289, eff. 2-1-80; r. (2) (f), r. and recr. (5) (a), Register, August, 1985, No. 356, eff. 1-1-86; am. (3) (a) and (5) (b), cr. (6), Register, May, 1988, No. 389, eff. 6-1-88.

ILHR 52.61 Protection from freezing. All water-closets and urinals and the pipes connecting therewith shall be properly protected against freezing, so that such water-closets and urinals will be in proper condition for use at all times.

ILHR 52.62 Disposal of sewage. (1) Each water-closet and urinal, and each lavatory or slop sink, located in a toilet room shall be connected with a sewer and water system, where such systems are available. In locations where a sewer system is not available, or cannot be made available, the disposal of human waste may be accomplished as follows:

- (a) Sewage treatment tank and disposal system; or

Note: For detailed requirements on such systems see ch. ILHR 82.

(b) Where the local conditions make it impractical to install such system, outdoor toilets, as described in s. ILHR 52.63, or other facilities, such as septic toilets installed in accordance with the provisions of the septic toilet code issued by the department may be used; provided that in the case of places of employment for more than 10 persons, schools larger than 2 rooms, and apartment houses, water-flush toilets as herein described shall be provided, unless outdoor toilets or other facilities are permitted in writing by the department.

ILHR 52.63 Outdoor toilets. (1) Outdoor toilets shall comply with ss. ILHR 52.50 to 52.59, inclusive, and in addition:

(a) No privy, with or without a leaching pit or other container, shall be erected or maintained within 50 feet of any well, 10 feet of the line of any street or other public thoroughfare, 5 feet of the property line between premises or 25 feet of the door or window of any building;

(b) Located on ground that is well drained, and where there is no possibility of contaminating any drinking water supply;

(c) Provided with suitable approach, such as concrete, gravel or cinder walk;

(d) The foundations shall be of concrete or other masonry;

(e) The vault shall extend at least 6 inches above ground, be as dark as possible, and be proof against entrance by flies, rats, or other vermin. The upper portion shall be of concrete, or of brick or stone laid in cement mortar. If in poorly drained soil, the entire vault shall be of concrete, or brick, or stone, laid in cement mortar;

(f) All windows, ventilators and other openings shall be screened to prevent the entrance of flies, and all doors shall be self-closing. A separate ventilator shall be provided for the vault and shall extend from the vault to not less than one foot above the roof and be provided with an effective ventilating hood; and

(g) The entire installation shall be kept clean and sanitary. Milk of lime (freshly slaked lime) or other equally effective disinfectant shall be used in the vault and in the urinal trough in sufficient quantities, and at frequent intervals. The floors, seats and urinals shall be scrubbed as often as necessary. The vault shall be cleaned out at proper intervals.

ILHR 52.64 Maintenance and housekeeping. (1) **MAINTENANCE OF TOILETS.** Every toilet room, and every part thereof, including walls, floor, ceiling and fixture therein, shall be kept clean, efficient, and in good repair.

(2) **PAPER.** In every toilet room, sufficient toilet paper made of material which will not interfere with the operation of the system or obstruct the fixtures, shall be provided.

(3) **DEFACEMENT.** Indecent or suggestive marks, pictures, or words are forbidden in toilet rooms, and such defacement when found shall be removed at once.

(4) **SERVICE CLOSETS.** In buildings having 5 or more fixtures (water closets and/or urinals) a service closet shall be provided conforming with the requirements for toilet rooms.

(a) The service closet shall be supplied with mop, broom, bucket, soap, toilet paper, toweling and other equipment for sanitary upkeep of toilet rooms.

History: 1-2-56; r. and recr. (4), Register, October, 1967, No. 142, eff. 11-1-67.