

TABLE 54.01-2 — ALLOWABLE HEIGHT (STORIES) AND AREA (SQUARE FEET) FOR BUILDINGS COMPLETELY PROTECTED BY AUTOMATIC FIRE SPRINKLER SYSTEM (MAXIMUM GROSS FLOOR AREA PER FLOOR) NOTE: USE FOR ALL BUILDINGS

CLASS OF CONSTRUCTION	BUILDING FRONTAGE STREET EXPOSURE	NUMBER OF STORIES									
		1	2	3	4	5	6	7	8	9	Over 9
1. Fire-resistive Type A stories and area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	NO LIMIT									
	2	NO LIMIT									
	3	NO LIMIT									
	4	NO LIMIT									
2. Fire-resistive type B 1 to 9 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1		69,000	60,000	51,000	42,000	33,000	27,000	21,000	18,000	N.P.
	2	NO	85,500	75,000	66,000	55,500	46,500	39,000	33,000	30,000	
	3	LIMIT	102,000	93,000	81,000	69,000	60,000	51,000	45,000	42,000	
	4		118,500	111,000	96,000	82,500	73,500	63,000	57,000	54,000	
3. Metal frame protected 1 to 5 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	84,000	63,000	54,000	45,000	36,000	N.P.	N.P.	N.P.	N.P.	N.P.
	2	106,000	79,500	69,000	58,500	48,000					
	3	128,000	96,000	84,000	72,000	60,000					
	4	150,000	112,500	99,000	85,500	72,000					
4. Heavy Timber 1 to 3 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	68,000	51,000	42,000	33,000	27,000	N.P.	N.P.	N.P.	N.P.	N.P.
	2	88,000	66,000	57,000	48,000	40,500					
	3	108,000	81,000	72,000	63,000	54,000					
	4	128,000	96,000	87,000	78,000	67,500					
5A. Exterior Masonry Protected 1 to 3 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	62,000	46,500	40,500	28,500	24,000	N.P.	N.P.	N.P.	N.P.	N.P.
	2	80,000	60,000	51,000	42,000	37,500					
	3	98,000	73,500	64,500	55,500	46,500					
	4	116,000	87,000	78,000	69,000	58,500					
5B. Exterior Masonry Unprotected 1 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	56,000	42,000	34,500	27,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	2	72,000	54,000	45,000	37,500						
	3	88,000	66,000	57,000	48,000						
	4	104,000	78,000	69,000	58,500						
6. Metal Frame Unprotected 1 story area may be unlimited subject to s. ILHR 54.01 (5) (b)	1	56,000	42,000	34,500	27,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	2	72,000	54,000	45,000	37,500						
	3	88,000	66,000	57,000	48,000						
	4	104,000	78,000	69,000	58,500						
7. Wood Frame Protected	1	50,000	37,500	22,500	16,500	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	2	64,000	48,000	30,000	21,000						
	3	76,000	57,000	36,000	25,500						
	4	88,000	66,000	42,000	30,000						
8. Wood Frame Unprotected	1	40,000	30,000	15,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	2	48,000	36,000	18,000							
	3	56,000	42,000	21,000							
	4	64,000	48,000	24,000							

N.P. MEANS NOT PERMITTED

(5) STREET ACCESS TO BUILDINGS. (a) Streets shall be within 50 feet of the adjacent building side with no obstructions between the street and the building which will impede fire-fighting efforts.

Note: See s. ILHR 51.01 (124) for definition of street.

(b) 1. Unlimited area buildings of fire-resistive type 1 construction and one-story unlimited area buildings of fire-resistive type 2 construction shall be provided with street access as defined in s. ILHR 51.01 (124) to at least one side of the building.

2. Unlimited area buildings of type 3 through type 6 construction shall have a continuous all-weather, hard-surfaced area 30 feet or more in width for a distance of not less than 50% of the perimeter of the building. These buildings shall have at least one wall facing a street for its entire length. At least 2 of the remaining building walls shall face streets for at least 50% of their respective lengths.

(6) HEIGHT EXCEPTIONS. Rack storage facilities of noncombustible construction protected with automatic fire sprinkler systems installed in accordance with NFPA

No. 231C — Standard for Rack Storage of Materials, may be of unlimited height.

(7) PUBLIC MAUSOLEUM CONSTRUCTION. Public mausoleum structures shall be constructed in accordance with s. ILHR 51.03 and mausoleum spaces shall be constructed of reinforced concrete.

History: 1-2-56; am. (2) and (3), Register, September, 1959, No. 45, eff. 10-1-59; am. (3), Register, February, 1971, No. 132, eff. 7-1-71; r. and recr. (3), eff. 8-1-71 and exp. 1-1-72; cr. (3) eff. 1-1-72, Register, July, 1971, No. 187; r. and recr. (1) and (2), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr. (2) and (3), Register, September, 1973, No. 213, eff. 10-1-73; cr. (2) (a) 2 a, Register, December, 1977, No. 264, eff. 1-1-78; am. (2) (b) 2. a. and (2) (c), cr. (4), Register, November, 1978, No. 276, eff. 1-1-79; am. (3), Register, January, 1980, No. 289, eff. 2-1-80; r. and recr. table, am. (2) (b) 2. and (3), Register, December, 1981, No. 312, eff. 1-1-82; reprinted to correct errors in Table 54.01 and (2) (b) 2., Register, February, 1982, No. 314; am. (3), Register, December, 1983, No. 336, eff. 1-1-84; renum. (2) (a) and (c) to be (2) (a) 1. and (d), (2) (a) 2. renumb. and am. from ILHR 54.23, am. (2) (b) 1. and 2., r. and recr. (2) (b) 3., cr. (2) (c), Register, August, 1985, No. 356, eff. 1-1-86; emerg. r. and recr. (1) to (4), cr. (5) and (6) and tables 54.01-1 and 54.01-2, r. table 54.01, eff. 9-6-86; r. and recr. (1) to (4), cr. (5), (6) and tables 54.01-1 and 54.01-2, r. table 54.01, Register, November, 1986, No. 371, eff. 12-1-86; am. (4) (a) 1. d., Register, March, 1991, No. 423, eff. 4-1-91; cr. (7), Register, March, 1992, No. 435, eff. 4-1-92; renum. (5) (b) 1. and 2. to be 2. and 1. and am. 2., Register, January, 1994, No. 457, eff. 2-1-94.

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ILHR 54.02 Number and location of exits. (1) **NUMBER OF EXITS.** Every building and every floor level thereof shall have at least 2 exits.

(2) **EXCEPTIONS.** One exit will be permitted in the following conditions:

(a) Floor levels used entirely for storage in buildings 2 stories or less in height and not over 3,000 square feet gross area per floor.

(b) Interior balconies or mezzanine floors not over 3,000 square feet gross area used entirely for storage.

(c) Open interior balconies or open mezzanine floors not over 750 square feet gross area used for purposes other than nonoccupied storage.

(d) One-story office buildings, without a basement or mezzanine, having a gross floor area, per floor, of not more than 1,800 square feet. Only one office operation per floor level shall be permitted. The single exit from the first floor or ground floor(s) shall be an outside exit serving only that floor level.

(e) Retail establishments not over 750 square feet net area, provided there are 2 directions for exiting from the entrance door of the store.

(f) Enclosed interior mezzanine floors, not over 750 square feet gross area, that are used for office space, where the distance to the exit is no more than 100 feet in an unsprinklered building, or no more than 150 feet in a building completely protected by an approved automatic sprinkler system, provided:

1. Each wall facing the lower level is a minimum of 30% glazed with vision panels; and

2. Smoke detection in accord with NFPA 72E, or an equivalent system acceptable to the department, is provided to all parts of the building within 100 feet of the mezzanine, with the detectors on the main floor and a horn in the mezzanine level.

(3) **OFFICE SUITE EXITING.** One exit or exit access may be permitted from office suites having a floor area of not more than 1,800 square feet net area, provided there are 2 directions for exiting from the exit or exit access from the suite, and provided the exit distance within the suite, to the exit or exit access from the suite, does not exceed 75 feet in an unsprinklered building, or 100 feet in a completely sprinklered building.

Note: See Appendix A for further explanatory material.

(4) **EXIT DISTANCE.** (a) Exits shall be distributed or located so that no part of any building within the scope of this chapter will be more than 150 feet distant from an exit.

Note: See Appendix A for further explanatory material.

(b) Where an approved automatic fire sprinkler system is provided throughout the building, an increase in exit distance to 200 feet will be permitted for mercantile buildings and an increase in exit distance to 300 feet will be permitted in all other buildings within the scope of this chapter, except high hazard buildings.

(c) Buildings having contents which are liable to burn with extreme rapidity or from which poisonous fumes may

be liberated or explosions occur in case of fire, shall have exits provided so that the maximum distance to exit is limited to 75 feet.

Note: See s. A52.011 of Appendix A for further information relating to "high hazard" occupancies.

(d) All of the above distances shall be measured along public passageways and aisles.

Note: Also see s. ILHR 54.08 (1) for alternate exit distance provisions.

(5) **EXIT DISTRIBUTION.** Exits in all buildings of this classification shall be so located and distributed so as to afford the best possible egress.

History: 1-2-56; cr. (1) (c), Register, September, 1959, No. 45, eff. 10-1-59; am. (1) (b), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (b) eff. 8-1-71 and exp. 1-1-72, and cr. (1) (b) eff. 1-1-72, Register, July, 1971, No. 187; am. (1), Register, September, 1973, No. 213, eff. 10-1-73; r. and recr. Register, December, 1978, No. 276, eff. 1-1-79; am. (4), Register, January, 1980, No. 289, eff. 2-1-80; am. (4), Register, December, 1981, No. 312, eff. 1-1-82; emerg. am. (4) (b), eff. 9-6-86; am. (4) (b), Register, November, 1986, No. 371, eff. 12-1-86; cr. (2) (f) am. (3), Register, January, 1994, No. 457, eff. 2-1-94.

ILHR 54.03 Type of exits. (1) At least one-half of the exits required in accordance with s. ILHR 54.02 shall be stairways or standard exits to grade as specified in ss. ILHR 51.15 to 51.18. The other exits shall be either stairways, standard exits, or horizontal exits as specified in s. ILHR 51.19, or fire escapes as specified in s. ILHR 51.20. A fire escape will not be accepted as a required exit for any building level more than 5 stories or 55 feet above grade. An outside wooden stairway may be used as an exit for a 2-story building.

(a) *Exception.* The width of required exit stairways serving unoccupied areas (i.e., storage areas, equipment mezzanines and similar areas) not exceeding 750 square feet may be reduced to 3 feet 0 inches.

(b) *Exception.* Less than 3 risers may be used to elevated work stations (such as pharmacy floors, computer floors and similar areas) or to altars, podiums and similar areas, not in a required exit passageway.

(c) *Exception.* A spiral stairway may be used as a nonrequired convenience stairway in addition to all other required exit stairways in places of employment.

(d) *Exception.* A rescue platform (exterior balcony) of combustible construction may be used as a required second exit for buildings of type 5, 6, 7 and 8 construction, provided all of the following conditions are satisfied:

1. The exit serves 8 or less people;
2. The exit platform is located not more than 15 feet above the adjacent exit discharge grade;
3. The platform area is at least 14 square feet, with a minimum dimension of 3 feet;
4. The platform is designed for 80 pounds per square foot live load plus dead load;
5. Railings are provided in accordance with the provisions of s. ILHR 51.162;
6. Platforms having solid floors are provided with a roof equal in area to that of the platform;
7. All wood used in the construction of the rescue platform shall be pressure treated wood satisfying the re-

quirements of the applicable standards specified in s. ILHR 53.63 (6) unless the wood is inherently resistant to decay; and

8. The exit door to the platform is not less than 2 feet 6 inches in width.

(2) Every building which will accommodate more than 50 persons above the second story shall have at least 2 stairways.

(3) Wherever stairways are required under this classification, ramps with a slope not greater than one foot in 8 feet may be substituted. Ramps shall comply with all the requirements for stairways as to construction, enclosures, width, landing and lighting, and shall be surfaced with an approved non-slip material.

History: 1-2-56; am. (1), Register, December, 1974, No. 228, eff. 1-1-75; cr. (1) (a) to (d), eff. 1-1-78; am. (1) (b), Register, December, 1978, No. 276, eff. 1-1-79; am. (1) (d) 5. and (3), Register, January, 1980, No. 289, eff. 2-1-80; am. (1) (d) (intro.) 5. and 6., cr. (1) (d) 7., Register, December, 1983, No. 336, eff. 1-1-84; am. (1) (d) (intro.), 6. and 7., cr. (1) (d) 8., Register, March, 1991, No. 423, eff. 4-1-91; am. (1) (d) (intro.), Register, January, 1994, No. 457, eff. 2-1-94; am. (1) (d) 2., Register, March, 1995, No. 471, eff. 4-1-95.

ILHR 54.04 Required exit width. (1) The total required exit width from a building level shall be in accordance with the requirements of ss. ILHR 51.15 (6) and 51.16 (3).

(2) Standard fire escapes (s. ILHR 51.20) may be substituted for stairways to the extent of not more than of the required total width, subject to the provision of s. ILHR 54.02.

(3) Horizontal exits in accordance with the requirements of s. ILHR 51.19 may provide up to one-half of the required exit width for any floor, subject to the provisions of s. ILHR 54.02.

History: 1-2-56; am. (1) (a) and (b) and (3) (a) and (b), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr. (1) and (3), r. (4), Register, December, 1974, No. 228, eff. 1-1-75.

ILHR 54.05 Capacity of buildings. (1) In calculating the aggregate width of exits, the capacity of the buildings shall be established as follows:

(a) Stores, first floor and basement----- 30 sq. ft. per person

(b) Stores, second floor and above ----- 60 sq. ft. per person

(c) Dining rooms, cafes, taverns, etc. ---- 10 sq. ft. per person

(d) Places of seated assemblage --- 7 sq. ft. per person

(e) Warehouses ----- 300 sq. ft. per person

(f) Factories and offices----- 75 sq. ft. per person

(g) Swimming pool rooms--- 10 square feet per person for deck area.

(2) The above figures are based on the net area of each occupied space. Where dining rooms, cafes, dance halls and places of seated assemblage accommodate more than 100 persons, see s. ILHR 55.01.

(3) In other occupancies not specified above, the capacity shall be determined by the actual number of persons

liable to be accommodated therein and no greater number of persons will be permitted therein.

History: 1-2-56; cr. (1) (g), Register, January, 1994, No. 457, eff. 2-1-94.

ILHR 54.06 Exit doors. (1) **GENERAL.** Every door which serves as an exit from a building, public passageway or stairway shall be a standard exit door as specified in s. ILHR 51.15, except:

(a) Exit doors serving 25 or fewer persons need not swing in the direction of egress;

(b) Exit access doors serving 25 or fewer persons may be reduced in width to 2 feet 8 inches and may be a sliding or accordian-type door;

(c) Rolling, sliding and overhead types of doors or gates may be used as standard exit doors for tenant spaces in malls provided:

1. The door or gate is equipped with exit hardware in accordance with s. ILHR 51.15 (3);

2. The door or gate is counterbalanced such that it can be opened by a force not exceeding 12 pounds, or, if the door or gate is electrically operated, the door is supplied by an emergency power source capable of opening the door or gate;

3. The door or gate is maintained in a fully opened position during the business hours of the tenant space;

4. A security device permitted by s. ILHR 51.15 (3) (e) 2. is not engaged when the tenant space is occupied; and

5. Manual, chain hoist operators for the doors or gates are not employed.

(2) **ILLUMINATED EXIT SIGNS.** Every exit door from each floor level, other than the principal entrance for the building, shall be marked with an exit sign as specified in s. ILHR 51.15 (5).

(3) **SECURITY GATES.** Exterior security gates shall be permitted to protect exterior exit doors in accordance with this subsection.

(a) A security gate may not be closed or locked when the building or portion of the building protected by the security gate is occupied.

(b) When the gate is locked in place the gate shall be visible from the exterior of the building.

(c) A security gate may not be locked over exit doors which serve more than one building occupancy or tenant space.

(d) The locking device for a security gate which requires the use of a key or a combination to open it shall be accessible from the exterior of the building.

(e) The building owner shall send to the local fire department and building inspection department a letter indicating that a security gate is to be installed and maintained in accordance with this section.

(f) The department or its authorized deputies shall have the authority to revoke the use of any security gate for any

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exterior exit door upon the violation of any one provision specified in pars. (a) to (e).

History: 1-2-56; am. (1), Register, December, 1978, No. 276, eff. 1-1-79; am. Register, January, 1980, No. 289, eff. 2-1-80; am. Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 54.07 Exit access. (1) Where there is not direct access to an exit or exits from an area within a building, exit access corridors, passageways, or aisles shall be provided to lead to the exit or exits.

(2) (a) The width of a corridor, passageway or aisle which provides access to an exit shall be at least:

1. Three feet, if the corridor, passageway or aisle serves a space with an occupant load not greater than 25 persons; and

2. Three feet 8 inches, if the corridor, passageway or aisle serves a space with an occupant load greater than 25 persons.

(b) The width of a corridor, passageway or aisle which provides egress from an exit shall be at least as wide as the required width for the exit served, as determined under ss. ILHR 51.15 (6) and 51.16 (3).

(3) (a) The width of a corridor, passageway, or aisle which provides access to or egress from an exit shall be determined at the narrowest point produced by any projection or other similar object or obstruction.

(b) The required width of a corridor, passageway, or aisle which provides access to or egress from an exit as determined under this section shall be maintained clear and unobstructed at all times.

Note: See s. ILHR 52.04 (9) for corridor widths to accommodate the physically disabled.

History: 1-2-56; am. Register, December, 1981, No. 312, eff. 1-1-82; r. and recr. Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 54.08 Enclosure of stairways and shafts. (1) (a) Except as provided in par. (b), all stairways including landings, ramps and shafts, shall be enclosed as specified in s. ILHR 51.02 (11).

(b) 1. The stairways or shafts connecting one floor level with another floor level immediately adjacent to it may be left unenclosed where the distance to an exit from the area served by the open stairway including the horizontal travel distance on the exit access stair, does not exceed 100 feet in buildings not completely protected by an approved automatic sprinkler system or 150 feet in buildings completely protected by an approved automatic sprinkler system; or

2. Any stairway or shaft connecting the second floor, first floor and basement or ground floor shall be separated at the first floor level or first adjacent basement or ground floor level with fire resistive construction as specified in Table 51.03-A or better in buildings 2 stories or less in height, and where the distance to an exit from the area served by the open stairway including the horizontal travel distance on the exit access stair, does not exceed 100 feet in buildings not completely protected by an approved automatic sprinkler system or 150 feet in buildings completely protected by an approved automatic sprinkler system.

Register, March, 1995, No. 471

(2) All doors opening into such enclosures shall be as specified in s. ILHR 51.047, and all windows shall be of wired glass and metal frames and sash.

Note: See ch. ILHR 18 for requirements governing the installation and operation of elevators.

History: 1-2-56; am. (1) (a), (b), (c), (d) and (2), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (a), (b), (c), (d) and (2) eff. 8-1-71 and exp. 1-1-72; cr. (1) (a), (b), (c), (d) and (2) eff. 1-1-72, Register, July, 1971, No. 187; r. and recr. (1), Register, June, 1972, No. 198, eff. 1-1-73; am. (3), Register, December, 1977, No. 264, eff. 1-1-78; r. (3), Register, December, 1978, No. 276, eff. 1-1-79; am. (1), Register, January, 1980, No. 289, eff. 2-1-80; am. (1), Register, October, 1982, No. 322, eff. 11-1-82; am. (1) (b), Register, December, 1983, No. 336, eff. 1-1-84; r. and recr. (1) (b) 1., Register, March, 1991, No. 423, eff. 4-1-91.

ILHR 54.10 Trap doors and floor openings. Every opening through any floor or through any roof used by the public or by employes shall be guarded by a substantial enclosure or rail not less than 3 feet 6 inches high. Floor openings in buildings of more than 2 stories, unless enclosed with fire-resistive enclosures as specified in s. ILHR 54.08 shall be protected by fire-resistive doors as specified in s. ILHR 51.047.

History: 1-2-56; am. Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. eff. 8-1-71 and exp. 1-1-72; cr., Register, July, 1971, No. 187, eff. 1-1-72.

ILHR 54.105 Toeboards. A toeboard shall be provided at the exposed edges of all elevated platforms, walks, balconies, mezzanines, ramps and floor openings to prevent the fall of materials where the elevation difference is greater than 5 feet. The toeboard shall extend 4 inches above the finished floor. Where material is stockpiled to a height where the toeboard does not provide adequate protection, additional measures shall be taken to prevent the fall of materials.

(1) EXCEPTION. Toeboards are not required on stairways or ramps and their landings or platforms.

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

ILHR 54.11 Lighting. (1) (a) All stairways, fire escapes and exits, and the passageways leading thereto when used at night, shall be properly illuminated to facilitate egress. The intensity of illumination shall be as specified in ch. Ind 19.

(b) The level of intensity of illumination for fire escapes may be reduced to 2.5 foot candles.

(2) All gas jets or gas lights in factories or workshops where combustible material is used, shall be properly enclosed by globes or wire cages, or otherwise properly guarded.

History: 1-2-56; am. (1), Register, August, 1985, No. 356, eff. 1-1-86; am. (1) (a), Register, January, 1994, No. 457, eff. 2-1-94.

ILHR 54.12 Sanitary facilities. (1) GENERAL. The occupancies included under the scope of this chapter shall be provided with toilet rooms as outlined in this section.

(a) The toilet rooms shall be available for all occupants and employes during all hours of operation and located as specified in sub. (2) (b) 2.

(b) Toilet rooms for employes shall be accessible and convenient during all hours of operation.