Chapter Comm 59

HAZARDOUS OCCUPANCIES

Note: Chapter Ind 59 was renumbered chapter ILHR 59 effective January 1, 1984. **Chapter ILHR 59 was renumbered to be chapter Comm 59 under s. 13.93 (2m) (b) 1., Stats., and corrections made under s. 13.93 (2m) (b) 7., Stats., Register, September, 1998, No. 513.**

Comm 59.001 Scope. This chapter applies to all hazardous occupancies as indicated in the scope of each subchapter.

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

Comm 59.01 Definitions. (1) "Combustible liquid" means a liquid as defined in s. ILHR 10.01 (22).

(2) "Flammable liquid" means a liquid as defined in s. ILHR 10.01 (37).

(3) "Motor vehicle" means any self–propelled device fueled by a flammable or combustible liquid used to transport people or goods.

(4) "Open parking structure" means a structure as defined in s. Comm 62.10.

(5) "Private garage" means a structure or a part of a structure, either attached to a one– or 2–family dwelling or unattached but serving the dwelling, housing one or more motor vehicles owned by the occupant of the dwelling and used only for personal or family service, not serving as a place of employment.

(6) "Repair garage" means a structure or any part of a structure in which one or more motor vehicles are primarily repaired or serviced.

(7) "Storage garage" means any structure or part of a structure in which one or more motor vehicles are stored or parked and which is not a repair garage, private garage or open parking structure.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; corrections in (1) and (2) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 1994, No. 457, eff. 2–1–94.

Comm 59.10 Scope. (1) The requirements of this subchapter apply to storage garages and repair garages.

(2) This chapter does not apply to the following occupancies:

(a) Storage garages serving community–based residential facilities within the scope of ch. Comm 61;

Note: See s. Comm 61.10 (2).

(b) Areas of factories and plants used for the manufacture or assembly of motor vehicles or their components;

(c) Drive–in or drive–through facilities not used for the storage of motor vehicles including, but not limited to those of banks, restaurants, hospitals, car washes, film processing centers or other similar occupancies; and

(d) Attached storage garages 500 sq. ft. or less in area serving a residential occupancy as specified in ch. Comm 57.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; am. (1) and (2) (d), Register, March, 1991, No. 423, eff. 4–1–91; am. (2) (intro.), Register, January, 1994, No. 457, eff. 2–1–94.

Comm 59.11 Construction. (1) FLOORS. (a) The floor areas accommodating motor vehicles shall be of earth, gravel or noncombustible, nonabsorbent materials.

(b) Service pits and other similar depressions in the floor of a storage or repair garage shall be ventilated in accordance with ch. Comm 64.

(2) CLEARANCE REQUIREMENTS. Headroom clearances shall be maintained in accordance with s. Comm 51.164.

(3) CANOPIES. Free standing canopies and their supports or other similar structures over fuel dispensing equipment, when located less than 10 feet from a property line, shall be constructed of noncombustible materials.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; am. (1) (a), Register, October, 1982, No. 322, eff. 11–1–82.

Comm 59.12 Height and area. (1) STORAGE GARAGES. Storage garages shall not exceed the number of stories and corresponding area limitations of Table 59.12–1 or 59.12–2.

(2) REPAIR GARAGES. Repair garages shall not exceed the number of stories and 75% of the corresponding area limitations of Table 59.12–1 or 59.12–2.

(3) ALLOWABLE INCREASE OF FLOOR AREAS. (a) *Automatic fire sprinkler system protection.* 1. Chapter Comm 59 buildings not protected by automatic fire sprinkler systems may not exceed the height and area limitations specified in subs. (1) or (2) and Table 59.12–1.

2. a. Chapter Comm 59 buildings protected by complete automatic fire sprinkler systems may not exceed the height and area limitations specified in subs. (1) or (2) and Table 59.12–2.

b. The area of one story aircraft hangars of type No. 1 to 6 construction may be unlimited provided the building is completely protected by an automatic fire sprinkler system and the building is provided with street access around its entire perimeter.

(b) *Fire divisions.* No storage or repair garage shall be limited in area where divided into sections which do not exceed the maximum areas tabulated in this section by fire division walls as specified in s. Comm 51.02 (13). All openings in such walls shall be protected by swinging, sliding or overhead fire–resistive door assemblies as specified in s. Comm 51.047. Doors protecting such openings may be held open if equipped with rate of rise heat or photoelectric activated automatic closing devices. Doors used as required exits shall comply with the requirements of s. Comm 51.15.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; correction in (3) (a) made under s. 13.93 (2m) (b) 7., Stats., cr. (4), Register, August, 1985, No. 356, eff. 1–1–86; emerg. r. table 59.12 and cr. tables 59.12–1 and 59.12–2, am. (1) and (2), r. and recr. (3) (a), eff. 9–6–86; r. table 59.12 and cr. table 59.12–1 and 59.12–2, am. (1) and (2), r. and recr. (3) (a), Register, November, 1986, No. 371, eff. 12–1–86; r. (4), am. tables, Register, January, 1994, No. 457, eff. 2–1–94.

TABLE 59.12–1
ALLOWABLE HEIGHT (STORIES) AND AREA (SQUARE FEET) FOR BUILDINGS WITHOUT COMPLETE AUTOMATIC FIRE SPRINKLER SYSTEM PROTECTION (MAXIMUM GROSS FLOOR AREA PER FLOOR)

NOTE #1: DO NOT USE FOR BUILDINGS EXCEEDING 60 FEET IN HEIGHT

NOTE #2: FOR STORAGE GARAGES ONLY. USE 75% OF VALUES FOR REPAIR GARAGES

CLASS OF CONSTRUCTION	BUILDING FRONTAGE STREET* EXPOSURE	NUMBER OF STORIES 1	2	3	4	5	6	7	8	Over 8
1. Fire–Resistive Type A	1	25,000	22,000	19,000	16,000	13,000	11,000	9,000	8,000	6,000
	2	30,500	27,000	24,000	20,500	17,500	15,000	13,000	12,000	10,000
	3	36,000	33,000	29,000	25,000	22,000	19,000	17,000	16,000	14,000
	4	41,500	39,000	34,000	29,500	26,500	23,000	21,000	20,000	18,000
2. Fire–Resistive Type B	1	23,000	20,000	17,000	14,000	11,000	9,000	7,000	6,000	
	2	28,500	25,000	22,000	18,500	15,500	13,000	11,000	10,000	N.P.
	3	34,000	31,000	27,000	23,000	20,000	17,000	15,000	14,000	
	4	39,500	37,000	32,000	27,500	24,500	21,000	19,000	18,000	
3. Metal Frame Protected	1	21,000	18,000	15,000	12,000					
	2	26,500	23,000	19,500	16,000	N.P.	N.P.	N.P.	N.P.	N.P.
	3	32,000	28,000	24,000	20,000					
	4	37,500	33,000	28,500	24,000					
4. Heavy Timber	1	17,000	14,000	11,000	9,000					
	2	22,000	19,000	16,000	13,500	N.P.	N.P.	N.P.	N.P.	N.P.
	3	27,000	24,000	21,000	18,000					
	4	32,000	29,000	26,000	22,500					
5A. Exterior Masonry Protected	1	15,500	13,500	9,500	8,000					
	2	20,000	17,000	14,000	12,500	N.P.	N.P.	N.P.	N.P.	N.P.
	3	24,500	21,500	18,500	15,500					
	4	29,000	26,000	23,000	19,500					
5B. Exterior Masonry Unprotected	1	14,000	11,500	9,000	7,000					
	2	18,000	15,000	12,500	10,000	N.P.	N.P.	N.P.	N.P.	N.P.
	3	22,000	19,000	16,000	13,000					
	4	26,000	23,000	19,500	16,000					
6. Metal Frame Unprotected	1	14,000	11,500	9,000						
	2	18,000	15,000	12,500	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	3	22,000	19,000	16,000						
	4	26,000	23,000	19,500						
7. Wood Frame Protected	1	12,500								
	2	16,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	3	19,000								
	4	22,000								
8. Wood Frame Unprotected	1	10,000								
	2	12,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	3	14,000								
	4	16,000								

N.P. MEANS NOT PERMITTED

* A 4–HOUR FIRE DIVISION WALL MAY BE CONSIDERED AS A STREET FOR THE PURPOSE OF COMPUTING THE AREA LIMITATIONS FOR THIS TABLE PROVIDED THAT NO SUBDIVIDED PORTION OF THE BUILDING HAS MORE STREETS THAN THE ENTIRE BUILDING HAS.

TABLE 59.12–2
ALLOWABLE HEIGHT (STORIES) AND AREA (SQUARE FEET) FOR BUILDINGS COMPLETELY PROTECTED BY AUTOMATIC FIRE SPRINKLER SYSTEM (MAXIMUM GROSS FLOOR AREA PER FLOOR)

NOTE #1: USE FOR ALL BUILDINGS

NOTE #2: FOR STORAGE GARAGES ONLY. USE 75% OF VALUES FOR REPAIR GARAGES

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	1										
One street required for unlimited area.	2										
See s. Comm 51.01 (124)	3				NO	LIMIT					
	4										
	1		69,000	60,000	51,000	42,000	33,000	27,000	21,000	18,000	N.P.
2. Fire–resistive Type B	2	NO	85,500	75,000	66,000	55,500	46,500	39,000	33,000	30,000	
One street required for unlimited area.	3	LIMIT	102,000	93,000	81,000	69,000	60,000	51,000	45,000	42,000	
See s. Comm 51.01 (124)	4		118,500	111,000	96,000	82,500	73,500	63,000	57,000	54,000	
	1	84,000	63,000	54,000	45,000	36,000	N.P.	N.P.	N.P.	N.P.	N.P.
3. Metal frame protected	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					
	1	68,000	51,000	42,000	33,000	27,000	N.P.	N.P.	N.P.	N.P.	N.P.
4. Heavy Timber	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					
	1	62,000	46,500	40,500	28,500	24,000	N.P.	N.P.	N.P.	N.P.	N.P.
5A. Exterior Masonry Protected	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					
	1	56,000	42,000	34,500	27,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
5B. Exterior Masonry Unprotected	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						
	1	56,000	42,000	34,500	27,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
6. Metal Frame Unprotected	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						
	1	50,000	37,500	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
7. Wood Frame Protected	2	64,000	48,000								
	3	76,000	57,000								
	4	88,000	66,000								
	1	40,000	30,000	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
8. Wood Frame Unprotected	2	48,000	36,000								
	3	56,000	42,000								
	4	64,000	48,000								

N.P. MEANS NOT PERMITTED

*A 4–HOUR FIRE DIVISION WALL MAY BE CONSIDERED AS A STREET FOR THE PURPOSE OF COMPUTING THE AREA LIMITATIONS FOR THIS TABLE PROVIDED THAT NO SUBDIVIDED PORTION OF THE BUILDING HAS MORE STREETS THAN THE ENTIRE BUILDING HAS.

Comm 59.13 Types of exits. (1) GENERAL. (a) Only the following types of exits shall be used to comply with the provisions of s. Comm 59.14:

1. Standard exit as specified in s. Comm 51.15, except as provided in sub. (2);
2. Stairways as specified in s. Comm 51.16, except as provided in sub. (2);
3. Smokeproof stair tower as specified in s. Comm 51.17;
4. Interior enclosed stairway as specified in s. Comm 51.18;
5. Horizontal exit as specified in s. Comm 51.19;
6. Fire escapes as specified in s. Comm 51.20; and
7. Nonparking access ramps with a maximum slope of 1:8.

(b) At least half of the exits required under s. Comm 59.14 shall be standard exits, stairways, smokeproof stair towers or interior enclosed stairways to grade.

(2) EXCEPTIONS. (a) A spiral stairway shall not serve as a required exit, but may be used as an employe convenience stairway if located in nonpublic areas.

(b) The width of required exit stairways serving unoccupied areas, such as storage areas, equipment mezzanines and similar areas not exceeding 750 sq. ft. may be reduced to 3 feet 0 inches.

(c) Doors in standard exits serving rooms, spaces or areas with an occupancy load of 25 persons or less are not required to swing in the direction of egress.

(d) A door not complying with s. Comm 51.15 (2), may be used as a standard exit serving storage garages or storage areas not exceeding 3,000 square feet in area.

Note: Where accessibility and interior circulation for persons with functional limitations must be provided, the requirements of s. Comm 52.04 (9) govern.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; am. (2) (d), Register, August, 1985, No. 356, eff. 1–1–86.

Comm 59.14 Number and location of exits. (1) GENERAL. (a) Every floor level and every room, space or area of a storage garage and a repair garage shall be provided with at least 2 exits.

(b) One exit is permitted in the following conditions:

1. Any room, space or area used for storage garage purposes with an occupancy load of 10 persons or less and which does not exceed 3,000 sq. ft. in net floor area;

2. Any room, space or area used for repair garage purposes and which does not exceed 750 sq. ft. in net floor area;

3. Any room, space or area used as other than a storage or repair garage with a capacity of 25 persons or less; and

4. A mezzanine floor level, provided the mezzanine is:

a. Three thousand square feet or less in net floor area;

b. Used only for storage purposes;

c. Open on at least one side to the floor below; and

d. Not more than 12 feet above the floor below.

(2) EXIT DISTANCE. Exits shall be provided and distributed as follows:

(a) *Storage garages.* 1. No area of a storage garage shall be more than 100 feet from an exit, unless the entire storage garage is protected by an automatic sprinkler system.

2. No area of a storage garage entirely protected by an automatic fire sprinkler system shall be more than 200 feet from an exit.

(b) *Repair garages.* 1. No area of a repair garage shall be more than 75 feet from an exit, unless the entire repair garage is protected by an automatic fire sprinkler system.

2. No area of a repair garage entirely protected by an automatic fire sprinkler system shall be more than 150 feet from an exit.

(c) *Measurement of exit distance.* The exit distances required by this section shall be measured along public passageways and aisles to:

Note: See Appendix A for further explanatory material.

1. Standard exits leading to grade as specified in s. Comm 51.15;

2. Doors opening into smokeproof stair towers as specified in s. Comm 51.17, interior enclosed stairways as specified in s. Comm 51.18, or fire escapes as specified in s. Comm 51.20; or

3. Horizontal exits as specified in s. Comm 51.19.

(3) LOCATION OF EXITS. Except as provided in sub. (1) (b), exits in all storage garages and repair garages shall be located and distributed so that in the event an exit is blocked, another exit is available from every area of the storage garage or repair garage.

(4) EXIT LIGHTS. All required exits shall be identified by an approved exit light. Directional exit lights shall be provided to direct occupants to the exits. Exit lights and directional exit lights shall be as specified in s. Comm 51.15 (5).

(5) EXIT MAINTENANCE. Exits shall be maintained in accordance with s. Comm 52.21.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; cr. (4), Register, December, 1983, No. 336, eff. 1–1–84; emerg. am. (2) (a) 2. and (b), eff. 9–6–86; am. (2) (a) 2. and (b), Register, November, 1986, No. 371, eff. 12–1–86; am. (1) (a) and (b) (intro.), 2. and 3., Register, January, 1994, No. 457, eff. 2–1–94.

Comm 59.15 Required exit width. (1) GENERAL. Every floor level of a storage garage and repair garage shall be provided with at least the required aggregate width of exits as specified in ss. Comm 51.15 (6) and 51.16 (3).

(2) HORIZONTAL EXITS. Horizontal exits may provide up to one–half of the required aggregate width of exits for a floor level.

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

Comm 59.16 Capacity of structures. In calculating the required aggregate width of exits under s. Comm 59.15 and the required number of sanitary facilities under s. Comm 59.20, the capacities of structures and floor levels shall be computed on the following basis:

(1) Storage garages and repair garages – 300 sq. ft. per person; and

(2) Other areas as dictated by the appropriate sections of chs. Comm 54 to 62.

Note: See ss. Comm 54.05, 55.06, 56.07 for additional requirements.

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

Comm 59.17 Enclosure of stairways and shafts. (1) TWO FLOOR LEVELS. (a) All stairways and vertical openings serving 2 floor levels shall be enclosed with smoke partitions, unless:

1. The stairway or opening serves an open storage mezzanine less than 3,000 square feet in area;

2. The opening is not a required means of egress and the opening is separated from any exit access corridor or exit stairway by at least smoke partitions as specified in par. (a); or

3. The two–connected floor levels:

a. Are each provided with 6 air changes of exhaust ventilation per hour;

b. Are provided with interconnected fire detectors in accordance with NFPA 72;

c. Do not have open flame equipment located in the lower level; and

d. Have only pneumatic power equipment available for use.

(b) Smoke partitions enclosing stairways or vertical openings shall be constructed of solid and rigid materials.

(c) Openings in smoke partitions shall be protected with doors equipped with automatic closing devices.

(2) THREE OR MORE FLOOR LEVELS. Stairways and shafts serving 3 or more floor levels shall be enclosed pursuant to s. Comm 51.18 with fire–resistive construction as specified in Table 51.03–A.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; reprinted to correct error in (2), Register, February, 1982, No. 314; am. (2), Register, October, 1982, No. 322, eff. 11–1–82; r. and recr. (1), Register, March, 1991, No. 423, eff. 4–1–91; am. (1) (a) 3. a., Register, January, 1994, No. 457, eff. 2–1–94.

Comm 59.18 Vehicular guardrails. Vehicular guardrails shall be provided at all floor openings and at all differences in floor level elevations as follows:

(1) DRIVE LANES. Vehicular guardrails shall be installed at the end of drive lanes and shall be designed for a minimum horizontal live load of 1000 pounds per linear foot acting at 18 inches above the floor level; and

(2) PARKING STALLS. Vehicular guardrails shall be installed at the end of parking stalls and shall be designed for a minimum horizontal live load of 500 pounds per linear foot acting at 18 inches above the floor level.

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

Comm 59.19 Illumination levels. (1) EXITS. All stairways and exits and the passageways leading to them shall be illuminated to facilitate egress. The intensity of illumination shall be not less than 10 footcandles at the floor or step level.

(2) DRIVING AREAS. The minimum illumination level for driving areas at a horizontal plane 30 inches above the floor shall be an intensity of at least 2 footcandles.

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

Comm 59.20 Sanitary facilities. (1) GENERAL. Sanitary facilities shall be provided as specified in ss. Comm 54.12, 55.32 or 56.16, as appropriate for the use of the building.

(2) UNATTENDED STORAGE GARAGES. Sanitary facilities are not required to be provided in unattended storage garages.

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

Comm 59.22 Occupancy separations and hazard enclosures. Occupancies within the scope of this chapter shall be separated from other occupancies or uses in accordance with s. Comm 51.08. Hazards shall be enclosed in accordance with s. Comm 51.08.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; am. table, Register, October, 1982, No. 322, eff. 11–1–82; am. table, Register, December, 1983, No. 336, eff. 1–1–84; r. and recr., Register, March, 1991, No. 423, eff. 4–1–91; r. and recr. Register, December, 1995, No. 480, eff. 4–1–96; r. and recr., Register, March, 1997, No. 495, eff. 4–1–97.

Comm 59.23 Fire protection systems. (1) SPRINKLER SYSTEMS. Automatic fire sprinkler systems shall be provided as outlined in ss. Comm 52.01, 52.011, 52.012 and 52.013.

(2) STANDPIPES. (a) Fire department standpipes shall be provided as follows:

1. In all storage garages and repair garages 3 or more stories in height; and

2. In all storage garage and repair garage floor levels more than 500 sq. ft. in area, located below grade and not accessible to fire fighting vehicles.

(b) Required fire department standpipes with a fire department siamese connection greater than 50 feet to a street shall be interconnected to a standpipe system with such a connection 50 feet or less to a street.

(c) Required fire department standpipes shall be provided in each stair enclosure serving a storage or repair garage and shall be provided with approved 2½ in. valve hose connections at each floor level with one connection in the stair tower and one immediately outside.

(d) Fire department standpipes shall conform to the requirements specified in s. Comm 51.21 (3) (e) to (i).

(e) 1. The department will recognize alternative systems and designs in lieu of required fire department standpipes, if an equivalent degree of safety is provided in storage or repair garages 60 feet or less in height.

2. The department will accept storage garages or repair garages without fire department standpipes, if clearances are provided to allow fire fighting vehicles access throughout the storage or repair garages.

3. Fire department standpipes as specified in this subsection need not be provided in buildings 60 feet or less in height completely protected by an automatic fire sprinkler system.

4. Fire department standpipes shall be provided in buildings more than 60 feet in height in accordance with s. Comm 51.21 (3).

(3) FIRE EXTINGUISHERS. Portable fire extinguishers shall be provided and maintained as specified in s. Comm 51.22.

Note: See ch. Comm 52, subch. II for requirements pertaining to automatic fire sprinkler systems.

Note: See Appendix A for further explanatory material.

History: Cr. Register, December, 1981, No. 312, eff. 1–1–82; r. (2), renum. (3) to be (2), Register, June, 1983, No. 330, eff. 7–1–83; emerg. cr. (1) (e) 3. and 4., eff. 9–6–86; cr. (1) (e) 3. and 4., Register, November, 1986, No. 371, eff. 12–1–86; renum. and am. (1) to be (2), renum. (2) to be (3), cr. (1), Register, March, 1991, No. 423, eff. 4–1–91.

Comm 59.24 Fire alarms. A fire alarm system complying with s. Comm 51.24 shall be provided in every storage garage and repair garage where more than 10 persons are employed above the second story except storage garages and repair garages which are provided with a complete automatic sprinkler system.

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