

ORDINANCE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

SECTION 1. Chapter 13-172 of the Municipal Code of Chicago is hereby replaced in its entirety with the following new Chapter 13-172, as follows:

Chapter 13-172

Light and Ventilation

Section 13-172-010 Scope.

The provisions of this chapter shall govern the means of light and ventilation required in all buildings.

Section 13-172-020 Buildings on same lot.

Where more than one building is hereafter placed on a lot, or where a building is placed on the same lot with existing buildings and the several buildings are treated as a single structure for the purposes of this chapter, adequate sources of light and ventilation shall be provided for all occupied buildings.

Section 13-172-030 Definitions.

The following words and terms shall, for the purposes of this chapter, have the meanings shown herein.

“Attic” means the space between the ceiling beams of the top story and the roof rafters.

“Court” means an open, uncovered and unoccupied space on the same lot as a building where such space is enclosed wholly or partly by buildings, walls or other enclosing devices (see Section 13-172-130).

“Court, Inner” means any court enclosed wholly by buildings, walls or other enclosing devices.

“Court, Outer” means a court extending to and opening upon a street, public alley or other approved open space that is not less than 15 feet (4572 mm) wide, or upon a required yard.

“Court height” means the vertical distance from the lowest level of the court to the mean height of the top of the enclosing walls.

“Court width” means, as applied to an inner court, the least horizontal dimension; and, as applied to an outer court, means the shortest horizontal dimension measured in a direction substantially parallel with the principal open end of such court.

“Habitable space or room” has the meaning ascribed to the term “habitable room” in Section 13-4-010.

“Irregular or gore-shaped court and yard” means either a triangular (gore-shaped) or irregular air space surrounded by parts of a building on two or more sides and occurring either at grade or at an upper story.

“Multi-purpose room” means a room within a family dwelling unit which may be used as a study, office, multimedia room, or other function normally associated with family dwelling occupancy,

and which room is in excess of the essential family needs for living, dining, and sleeping outlined in Section 13-172-060 (c). Multi-purpose rooms shall not be used as bedrooms.

“Occupiable space” means a room or enclosed space other than in a family dwelling unit, designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged at labor; and which is equipped with means of egress and light and ventilation facilities meeting the building provisions of this code.

“Vapor retarder” means a material having a perm rating of 1.0 or less, such as foil, plastic sheeting, or insulation facing, installed to retard the passage of water vapor or moisture through the exterior envelope.

“Ventilation” means the natural or mechanical process of supplying or removing air from a room or space, as defined in section 13-176-010.

“Yard” means an unoccupied open space other than a court (see Section 13-172-130 and 13-172-140).

Section 13-172-060 Light and ventilation required.

(a) Light required. Every room or space intended for human occupancy shall be provided either natural or artificial light; provided however that all living, dining and sleeping rooms in family dwelling units; all patient rooms in institutional units; all guest rooms in hotels and motels; all day care centers offering care for children under two years of age; all class rooms or study rooms in Type 1 and Type 3 schools; and all habitable rooms in residential restrained care facilities shall be provided with natural light. Every bathroom and toilet room shall be provided with at least artificial light capable of an

average intensity of at least 3 footcandles (32.29 lux) measured at a level of 30 inches (762 mm) above the floor.

(b) Ventilation required. Every room or space intended for human occupancy shall be provided with natural or mechanical ventilation, provided however that living, dining and sleeping rooms in family dwelling units shall be provided with natural ventilation. Natural ventilation shall not be substituted for mechanical ventilation in rooms or spaces where mechanical ventilation is specifically required in Chapter 13-176.

(c) Multi-purpose room exemption. Notwithstanding requirements of paragraphs (a) and (b) above, certain rooms in single- and multi-family dwelling units in existing buildings constructed pursuant to a permit issued prior to April 1, 1998 may be considered multi-purpose rooms, and such rooms may be exempt from either the natural light or natural ventilation requirement provided that all of the following requirements are met. The exemption provided by this section shall not apply to any newly constructed building for which a permit was issued after April 1, 1998.

(i) When either natural ventilation or light is not provided, the room(s) are provided with mechanical ventilation in accordance with Table 13-176-070-A of this code and artificial light in accordance with Section 13-172-080;

(ii) The area of such undesignated room or rooms does not exceed 15% of the total floor area of the dwelling unit;

(iii) Any dwelling unit with a floor area up to 1,300 sq.ft has at least one (1) bedroom as well as areas or rooms designated for living and dining, in addition to the multi-purpose room(s); and

(iv) Any dwelling unit with a floor area over 1,300 sq. ft. has at least two (2) bedrooms as

well as areas or rooms designated for living and dining, in addition to the multi-purpose room(s).

Section 13-172-070 Natural light.

(a) Lighting standards. In the application of the provisions of this chapter, the standard of natural light, unless otherwise specifically required by the building provisions of this code for special occupancies and uses (described in Section 13-172-060), shall be based on 250 footcandles (2691 lux) of illumination on the vertical plane adjacent to the exterior of the light-transmitting device in the enclosure wall and shall be adequate to provide an average illumination of at least 6 footcandles (64.58 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

(b) Minimum glazing area. Every room or space intended for human occupancy shall have an exterior glazing area of not less than 8 percent of the floor area. Natural light shall be provided by glazing areas that open onto courts, yards or public ways which comply with the requirements of Section 13-172-130, or by other approved means.

(c) Borrowed light for remote rooms. Where natural light for rooms or spaces without exterior glazing areas is provided through an adjoining room, the unobstructed opening to the adjoining room shall be at least 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.33 m²). The plane of the opening through which light is borrowed for a remote room without windows shall be parallel to the window wall. The exterior glazing area shall be based on the total floor area being served.

13-172-080 Artificial light.

(a) General. Artificial light shall be capable of providing the minimum illumination specified for natural light.

(b) Stairway illumination. (i) All stairways within dwelling units shall be provided with a minimum illumination level of 10 footcandles (107 lux) measured at every tread nosing. Exterior stairways serving a dwelling unit shall have an illumination level on tread runs of 1 footcandle. (ii) The control for activation of the required stairway lighting within a dwelling unit shall be operable from the top and bottom of each stairway without traversing any step of the stair. The illumination of an exterior stairway serving a dwelling unit shall be controlled from inside the dwelling unit, unless continuously illuminated or automatically activated.

Section 13-172-090 Natural ventilation.

(a) General. Natural ventilation of an occupied space shall be through windows, doors, louvers or other natural openings to the outdoor air.

(b) Ventilation area required. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

(c) Borrowed ventilation for remote rooms. Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining room shall be unobstructed and shall have an area not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

(d) Ventilation through area wells. Where openings below grade provide required natural

ventilation, the outside horizontal clear space measured perpendicular to the opening shall be at least equal to or larger than the depth of the opening. The depth of the opening shall be measured from the average adjoining ground level to the bottom of the opening.

(e) Openings onto yards or courts. Where natural ventilation is to be provided by openings onto yards or courts, such openings shall comply with the requirements of Section 15-8-110 of the Municipal Code of Chicago.

Section 13-172-100 Mechanical Ventilation.

Mechanical ventilation shall conform to the requirements of Chapter 13-176.

Section 13-172-110 Ventilation of special spaces.

(a) Roof spaces.

(I) Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilation openings. The ventilation openings shall be tested for rain and snow infiltration in a manner representative of the intended installation and shall not permit the entrance of rain and snow when so tested. Ventilation openings shall not be provided in roof areas, or portions thereof, which are subject to snow drift as determined by Section 13-52-280.

(ii) The minimum required net free ventilating area shall be 1/150 of the area of the space ventilated. Where ridge or gable vents are utilized, one-half of the ventilation openings shall be provided by ridge or gable vents, with the balance of the ventilation openings provided by eave or

cornice vents. The openings shall be covered with corrosion-resistant mesh or other approved materials with openings not more than ½ inch (13 mm) in any direction.

(iii) The minimum required area is permitted to be reduced to 1/300, provided that a vapor retarder having a permeance not exceeding 1 perm is installed on the warm side of the ceiling; or the ridge or gable ventilation openings are located in the upper third of the space to be ventilated with the balance of the required ventilation provided by eave or cornice vents.

(b) Crawl spaces.

(I) Crawl space areas, other than those used as an underfloor plenum, shall be ventilated by an approved mechanical means or by openings in exterior foundation walls. Openings shall be located as close to corners as practicable and shall provide cross ventilation on at least two approximately opposite sides. The openings shall be covered with corrosion-resistant mesh not less than 1/4 inch (6 mm) nor more than ½ inch (13 mm) in any direction.

(ii) Openings shall have a net area of not less than 1 square foot (0.093 m²) for each 150 square feet (13.95 m²) of foundation space. Where an approved vapor retarder is installed over the ground surface, the required net area of openings shall be reduced to 0.1 square foot (0.093 m²) for each 150 square feet (13.95 m²) and vents shall have manually operable louvers.

(c) Alternative mechanical ventilation. Enclosed attic, rafter and crawl spaces which are not ventilated as herein required shall be equipped with a mechanical ventilation system conforming to the requirements of the mechanical code listed in Chapter 13-176, Chapter 13-180, Chapter 13-184 and Chapter 13-192.

Section 13-172-130 Courts and yards.

All courts and yards required to serve rooms for natural light or natural ventilation purposes shall comply with the requirements of this section.

(a) Minimum width. (I) Every such court or yard shall have a minimum width of 3 feet (1,005 mm) up to a height of 36 feet above grade and thereafter an additional 2 inches (76 mm) for each 1 foot (305 mm) of height or fraction thereof up to a maximum width of 15 feet (7620 mm). Above required width values shall apply to outer courts and twice these values shall apply for inner courts. (ii) In the case of irregular or gore-shaped courts or yards, as these are defined in section 13-172-030, the average width shall not be less than the required width of a court in accordance with subsection (a)(I) of this section, but shall not be less than 5 feet (1524 mm) at any point.

(b) Access to court. A door or other means of access shall be provided at the bottom of every court that is not otherwise provided with convenient access for purposes of cleaning.

(c) Air intakes. Every court which serves one or more habitable rooms and which does not open for its full height on one or more sides to a street or legal yard, shall be connected at or near the bottom with a street or yard by a horizontal intake or passage of fire-resistance rated construction, as provided in Section 15-8-660. Such intake or passage shall have a cross-sectional area of not less than 21 square feet (1.95 m²) and shall remain fully open at both ends and unobstructed for its full size and length, except that grilles of noncombustible construction are permitted at the ends of the intake.

Section 13-172-140 Obstruction of courts and yards.

(a) Permissible projections. Every required court and yard shall remain unobstructed for its

required area and full height, except for the projections permitted subsections (b) through (f) of this section.

(b) Maximum encroachment. A part of any building or structure shall not extend into side courts, inner courts or yards required for light and ventilation of habitable and occupiable rooms unless permitted by Section 5.7-5 of Title 17 of the Municipal Code of Chicago, the Chicago Zoning Ordinance. The encroachment shall not exceed 20 percent of the legal area of the yard or court which is required for light and ventilation purposes.

(c) Accessories. In Class A (residential) and Class B (institutional) occupancies, clothes poles, arbors, garden trellises and other such accessories shall not be prohibited in the open spaces at ground level.

(d) Steps and architectural features. Steps, window sills, belt courses and similar architectural features, as well as rain leaders and chimneys, shall not project more than 2 feet (610 mm) beyond the face of the wall.

(e) Exterior stairways and fire escapes. Outside stairways, smokeproof tower balconies, fire escapes or other required elements of a means of egress shall not project more than 4 feet (1219 mm) beyond the face of the wall.

(f) Motor vehicle parking. Where approved, required court and yard areas for automobile parking spaces or private garages not exceeding one story in height where accessory to and only for the occupants of a Class A (residential) occupancy are permitted, provided that required windows for light and ventilation are not obstructed thereby.

SECTION 2. Section 13-4-010, Section 13-64-010, Section 13-64-040, Section 13-80-010, Section 13-80-020, Section 13-80-060, Section 13-84-010, Section 13-100-010, Section 13-104-010, Section 13-108-010, Section 13-112-010, Section 13-200-230, Section 13-200-380, and Section 13-208-190 of the Municipal Code of Chicago are hereby amended by deleting the language bracketed and inserting the language underscored, as follows:

13-4-010 Definitions.

For the purpose of Title 13 of this code, the following terms shall be construed as follows:

. . .

["Alcove" means a recess adjoining and connecting with a larger room, with an unobstructed opening into such room complying with the requirements of Chapter 13-172.]

. . .

Court. For definition see Section 13-172-[020]030.

Court, Inner. For definition see Section 13-172-[020]030.

Court, Outer. For definition see Section 13-172-[020]030.

[Court, Through. For definition see Section 13-172-020.]

. . . .

13-64-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a residential unit as defined in Section 13-56-020 shall comply with the special provisions

of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following: . . .

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-010 Court and yard requirements.]

[Section 13-172-050 Natural lighting.]

[Section 13-172-110 Natural ventilation.]

[Section 13-172-150 Alcoves.] . . .

13-64-040 Minimum ventilation.

. . .

[(e) Alcoves complying with the requirements of Section 13-172-150 shall not be considered as separate rooms.] . . .

13-80-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an institutional unit as defined in Section 13-56-050 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to the following:

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-050 Natural lighting.]

[Section 13-172-110 Natural ventilation.] . . .

13-80-020 Jails.

(a) Jails shall be only of Types I-A, I-B or I-C construction, except that jails or lockups having an occupancy of not more than 10 prisoners may be of Types II, III-A or III-B construction.

(b) Natural light and ventilation for cells and lockups shall be furnished in accordance [by openings to the outside air complying] with the requirements of Chapter 13-172. [Such openings may be in a wall on the opposite of a corridor or gallery providing that the only obstruction thereto consists of the required restraining bars and devices.]

[13-80-060 Court and yard requirements.

Courts and yards required for natural light and ventilation shall comply with the requirements of [Sections 13-172-010 through 13-172-040] Section 13-172-130, except that no court or yard shall have a dimension of less than 10 feet.]

13-84-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an assembly unit as defined in Section 13-56-070 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-050 Natural lighting.]

[Section 13-172-110 Natural ventilation.] . . .

13-100-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a mercantile unit as defined in Section 13-56-130 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-110 Natural ventilation.] . . .

13-104-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an industrial unit as defined in Section 13-56-140 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-110 Natural ventilation.] . . .

13-108-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a storage unit as defined in Section 13-56-170 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 13-172 [Natural] Light and Ventilation.

[Section 13-172-110 Natural ventilation.]

13-112-010 General requirements.

Every building, structure or tank, part of a building, hereafter designed, erected, altered or converted for the purposes of a hazardous use unit, as defined in Section 13-56-210, shall comply with the building provisions of this code, including, but not limited to, the following:

. . . .

Chapter 13-172 [Natural] Light and Ventilation. . . .

13-200-230 Increase in one additional dwelling unit.

In any residential building or building of mixed occupancy, with one of the occupancies being residential, the number of dwelling units may be increased by one dwelling unit above the number of legally established dwelling units providing the building complies with the following requirements:

(e) [Natural I] Light and ventilation shall comply with requirements of Chapter 13-172[, except that the effective glazed or opening area may be computed at 100 percent of the actual glazed or opening area instead of 80 percent when facing a wall or other obstruction at a distance of less than 10 feet];

13-200-380 [Natural I] Light and ventilation.

Existing means of [natural] light and ventilation may remain and not be increased in area if they are in compliance with the codes in force at the time the building was built or altered. If the room sizes are altered, the [natural] light and ventilation requirements of Chapter 13-172 shall be met, except that existing courts or light wells need not be increased in size. [In buildings constructed prior to 1957 and converted to residential use, habitable rooms may share natural light and ventilation in accordance with the provisions of Chapter 13-172, if the rooms sharing natural light and ventilation do not exceed 30 percent of the total floor area of the unit.]

13-208-190 Planning requirements.

Every temporary overnight shelter shall comply with the following planning requirements: . . .

(c) Natural Lighting. Natural lighting requirements as described in Section 13-172-[050]070 of this code shall not be required for sleeping areas in temporary overnight shelters provided the provisions of Section 13-208-180 are met.

SECTION 3. Chapter 15-8 of the Municipal Code of Chicago is hereby amended by adding a new Section 15-8-660, as follows:

...

Section 15-8-660 Air Intakes in Courts and Yards

Air intakes in courts and yards as described in section 13-172-030 (c) shall be of fire rated construction of at least one hour in construction types II and IV; and fire rated construction of at least three hours in construction types I and III.

SECTION 4. Table 13-176-070-A and Table 13-176-070-B of Chapter 13-176 of the Municipal Code of Chicago are hereby amended by inserting the language underscored, as follows:

Table 13-176-070-A

	Conditions	Requirements	Other Conditions
	Area of Ventilating Openings in Percentage of Floor Area	Minimum C.F.M. supply or exhaust per square foot of floor area, except as otherwise noted. S indicates mechanical supply E indicates mechanical exhaust R. O. indicates relief opening N.R. indicates no requirement	
Room Purpose	Less Than	Not Less Than	

Armories	[5]4	N.R.	
	[5]4	S 0.8	
. . .			
Auditoriums, except those used for worship only		S 3.0 and E 1.5 in open spaces having no fixed seats plus S 30, and E 15, for each fixed seat	Capacity 601 or more persons
	[5]4	S 3.0 in open spaces having no fixed seats plus S 30 for each fixed seat and R.O.	Capacity 600 or less persons
	[5]4	S 3.0 and E 1.5 in open spaces having no fixed seats plus S 30 and E 1.5 for each fixed seat	Capacity 600 or less persons
. . .			
Banking rooms (public and teller spaces)		S 1.2 and E 1.2	Stories below that nearest to grade
	[5]4	N.R.	
	[5]4	S 1.0 or E 1.0	Other stories
. . .			
Beauty parlors	[5]4	N.R.	
	[5]4	S 1.2 and E 1.2	
Billiard rooms	[5]4	N.R.	
	[5]4	S 1.6 and E 1.2	
. . .			
Bowling alleys	[5]4	No requirement	

	[5]4	3	S 3.0 in open spaces having no fixed seats plus S 30 for each fixed seat. or E 3.0 in open spaces having no fixed seats plus E 30 for each fixed seat.	Disregard floor area from foul line to pit.
		3	S 3.0 and E 3.0 in open spaces having no fixed seats plus S 30 and E 30 for each fixed seat.	
. . .				
Class rooms, for religious instruction and Type III Schools exclusively	[5]4	[5]4	N.R. S 1.5 and E 0.75 or S 1.5 and R..O.	
Class rooms in private schools	8 [5]4	8 [5]4	N.R. S 1.5 or E 1.5 S 1.5 and E 0.75 or S 1.5 and R..O.	
. . .				
Cooking rooms for instructional purposes only	[5]4	[5]4	E 1.2 S 1.0 and E 1.2	
. . .				
Dance halls	[5]4	[5]4	S 3.0 S 3.0 and E 2.0 or S 3.0 and R.O.	
. . .				
Dining rooms in which there is no cooking equipment, public	[5]4 1	[5]4 1	N.R. S 1.5 or E 1.5 S 1.5 and E 1.5	
Dining rooms in which		1	E 2.0	

there is cooking equipment, public	1		S 1.5 and E 2.0
. . .			
Dressing rooms	[5]4	[5]4	N.R. S 1.0 and E 1.2
. . .			
Foyers in club houses and residential hotels	[5]4	[5]4	N.R. S 1.0
. . .			
<u>Guest rooms, hotels and motels</u>	4	4	<u>N.R.</u> <u>S 0.3 and E 0.3 or S 0.3 and R.O.</u>
Gymnasiums	[5]4	[5]4	No requirements S.8 to which the following shall be added if seats are provided for spectators. S 2.0 and E 1.0 or S 2.0 and R.O. in open spaces with no fixed seats and S 20 for each fixed seat.
. . .			
<u>Living quarters (not including</u>			Natural ventilation [Sitting rooms, Living rooms, parlors <u>multi-purpose rooms</u> and other rooms of <u>rooms</u> similar use;] dining rooms and bed rooms
			Natural ventilation Kitchens having a floor area of more than 125 square feet

	[5]4	[5]4	N.R. Kitchens having a E 1.5	floor area of less than 125 square feet
. . .				
Locker rooms	[5]4	[5]4	N.R. E 1.2	
. . .				
<u>Multi-purpose rooms in family units</u>	4	4	<u>N.R. S 0.3 and E 0.3 or S 0.3 and R.O.</u>	
. . .				
Offices	[5]4		[5]4 N.R. S 0.6 and E 0.3 or S 0.6 and R.O.	
. . .				
Patient rooms			Natural Ventilation <u>or 0.3 and E 0.35</u> <u>or 0.3 and R.O.</u>	[see Note 11]
. . .				
Police station cell rooms	[5]4	[5]4	N.R. S 1.2	
. . .				
Reading rooms	[5]4	[5]4	N.R. S 1.2 and E 0.6 or S 1.2 and R.O.	
. . .				
Rest rooms	[5]4	[5]4	N.R. S 1.0 and E 1.0 or S 1.0 and R.O. through locker or toilet rooms	

. . .

Sales rooms	[5]4	[5]4	N.R.
	2.5	2.5	S 0.5 or E 0.5
			S 1.0 and E 1.0 or S 1.0 and R.O.

Serving rooms and pantries	[5]4	2	E 2.0
	2		S 1.2 and E 2.0

. . .

Skating rinks, ice	[5]4	[5]4	N.R.
	5	4	S 1.8 and E 0.9]
	4	3	S 1.8 and E 1.2
	3	2	S 1.8 and E 1.5
	2		S 1.8 ans E 1.8

. . .

Sleeping stall rooms	[5]4	[5]4	N.R.
			S 0.5 and E 0.5

. . .

Smoking rooms	[5]4	[5]4	N.R.
			S 1.0 and E 1.5

Solariums	[5]4	[5]4	N.R.
			E 1.0

. . .

Toilet rooms	[5]4	[5]4	N.R.
			E 2.0

Toilet rooms residential	[5]4	[5]4	N.R.
			E 1.5

. . .

Waiting rooms,	[5]4	[5]4	N.R.
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except in railway stations and similar occupancies [5]4 S 1.0 and E 1.0

. . .

Table 13-176-070-B

Conditions	Conditions		Minimum C.F.M. supply or exhaust per square foot of floor area, except as otherwise noted. S indicates mechanical supply E indicates mechanical exhaust R. O. indicates relief opening N.R. indicates no requirement	Other Requirements
	Area of Ventilating Openings in Percentage of Floor Area	Not Less Than		
Room Purpose	Less Than	Less Than		
. . .				
Apparel shops and tailoring	[5]4	[5]4	N.R. See Chapter 4-224 S 1.5 and E 1.5	
Bakeries and food	Below Grade	[5]4	S 1.2 and E 1.0 N.R.	See Section 4-24-080
Baking rooms	[5]4		S 1.2 and E 1.0	
. . .				
Brewing and pasteurizing, packaging	[5]4	[5]4	S 1.0 and E 1.0 S 1.2 and E 1.2	See Note 2
Ceramics, brick, clay, cement	[5]4	[5]4	S 1.5 and E 1.5 S 2.0 and E 2.0	See Note 5

manufacturing
and processing

Cereal
manufacturing
and packaging

[5]4 [5]4 N.R.
S 1.2 and E 1.2 See Note 5

Chemical
manufacturing
and processing

[5]4 [5]4 N.R. See Note 5 and
S 1.0 and E 1.5 Sections 4-152-070
and 4-224-070, and
Chapters 15-24 and
15-28

Chewing gum
and diverse
departments

[5]4 [5]4 N.R. See Note 5
S 1.2 and E 1.2

Coffee roasting
[5]4

[5]4 N.R. See Note 5
S and E 0.5

Coffee packaging

[5]4 [5]4
S 2 and E 1.0

Confectionery
manufacturing

[5]4 [5]4 N.R. See Note 5 and
S 1.2 and E 1.0 Chapter 4-32

Distilling and
rectifying plants

[5]4 [5]4 N.R. See Note 2
S 1.2 and E 1.2

Dry cleaning
establishments
using petroleum
distillates

[5]4 [5]4 E 4.0
S 1.5 and E 4.0 See Note 5 and
Sections 15-24-900
through 15-24-980

...

Dyer establishments

[5]4 [5]4 N.R. See Note 5 and
S 1.5 and E 1.5 Chapter 15-24

Electrical products

[5]4 N.R. See Note 5 manufacturing [5]4

	S 1.2 and E 1.2		
and assembling			
Enamel, vitreous, finishing	[5]4 S 1.5 and E 1.5	N.R. See Note 5 and synthetic, Chapter 15-24	[5]4
Fertilizer manufacturing	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 5
Foundries, ferrous and nonferrous	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 5 and Section 4-224-130
Fur clothing making	[5]4	N.R. S 1.2 and E 1.2	See Note 5
Glassware and optical lenses	[5]4	N.R. See Note 5 S 1.2 and E 1.2	
Grain elevators, conveying, shaking, sifting departments	[5]4	S 1.2 and E 1.2 S 1.5 and E 1.5	See Notes 2, 5 and Chapter 15-28
Laboratories [5]4	[5]4 S 1.2 and E 1.2	N.R. See Note 5 and Chapter 4-88	
...			
Leather goods and product	[5]4	N.R. See Note 5 S 1.0 and E 1.0	manufacturing
...			
Machine shops	[5]4	N.R. See Note 5 and S 1.0 and E 1.0	Chapter 4-224
...			
Matches	[5]4	S 1.0 and E 1.0	See Note 5 and

manufacturing	[5]4		S 1.5 and E 1.5	Chapter 15-28
Packing houses, meats and food processing	[5]4	[5]4	N.R. S 0.6 and E 0.6	See Note 4
Paper products and specialties	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	
Paints and lead products and processing	[5]4	[5]4	N.R. See Note 5 and S 1.0 and E 1.0 Chapter 4-224	Chapter 15-24 and manufacturing
Paraffin, pitch, tar resin and similar processing	[5]4	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	
Paving material [5]4	[5]4	[5]4	N.R. See Note 2 and Note 5 manufacturing S 1.0 and E 1.0 and Chapter 15-28	
Pharmaceuticals and drugs, etc., manufacturing	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	and Chapters 4-88 and 4-224
Photo materials and engraving	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.0 and E 1.0	
Plastics manufacturing and molding	[5]4	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 2 and Note 5
Plating, metal	[5]4	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 2 and Note 5
Printing	[5]4	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 2 and Note 5
Rendering plants	[5]4	[5]4	S 1.0 and E 1.0 S 1.5 and E 1.5	See Note 2 and Note 5 and Chapter 4-52

Roofing material manufacturing	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	and Chapter 165
Rubber goods manufacturing	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	
Smelting and metal refining	[5]4	[5]4	N.R. See Note 5 and S 2.0 and E 2.0	Chapter 15-28
Soap manufacturing	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	and Chapter 4-224
Spray finishing, vitreous and non-vitreous	[5]4	[5]4	N.R. See Notes 5 and 7 and S 1.5 and E 1.5	Chapter 15-24
...				
Steel mills	[5]4	[5]4	N.R. See Note 5 and S 2.0 and E 2.0	Chapter 15-24
...				
Tanneries	[5]4	[5]4	N.R. S 1.0 and E 1.0	
Textile mills, cotton, wool, silk, and synthetics	[5]4	[5]4	N.R. S 1.5 and E 1.5	
Tobacco, cigar and cigarette manufacturing	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.5 and E 1.5	
Varnish manufacturing plants	[5]4	[5]4	N.R. See Note 2 and Note 5 S 1.0 and E 1.0	and Chapter 15-24
...				
Work shops not otherwise	[5]4	[5]4	N.R. See Note 5 S 1.2 and E 1.2	

