

CHAPTER 12

INTERIOR ENVIRONMENT

SECTION BC 1201 GENERAL

1201.1 Scope. The provisions of this chapter shall govern ventilation, temperature control, lighting, yards and courts, sound transmission, room dimensions, surrounding materials and rodent proofing associated with the interior spaces of buildings.

SECTION BC 1202 DEFINITIONS

1202.1 General. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

HABITABLE SPACE. All rooms and spaces within a dwelling unit in Group R or I-1, including bedrooms, living rooms, studies, recreation rooms, kitchens, dining rooms and other similar spaces.

Exception: The following spaces within a dwelling unit shall not be considered habitable spaces:

1. A dining space 55 square feet (5.1 m²) or less located off a living room, foyer or kitchen;
2. A kitchenette;
3. A bathroom or toilet room;
4. A laundry room; and
5. A corridor, passageway, or private hall; and a foyer used as an entrance hall in a dwelling unit: not exceeding 10 percent of the total floor area of the dwelling unit; or not exceeding 20 percent of the floor area of the dwelling unit where every habitable room is at least 20 percent larger than the required minimum room sizes established by the *New York City Housing Maintenance Code*.

KITCHEN. A room with 80 square feet (7.4 m²) or more of floor area which is intended, arranged, designed or used for cooking or warming of food.

KITCHENETTE. A space with less than 80 square feet (7.4 m²) of floor area which is intended, arranged, designed or used for cooking or warming of food.

OCCUPIABLE SPACE. A room or enclosed space, other than a habitable space, designed for human occupancy or use in which individuals may remain for a period of time for rest, amusement, treatment, education, dining, shopping, employment, labor or other similar purposes.

THERMALLY ISOLATED SUNROOM ADDITION. A one-story addition added to an existing building with a glazed area in excess of 40 percent of the gross area of its exterior walls and roof, with a separation of conditioned spaces, between such addition and a dwelling unit, consisting of existing or new wall(s), doors and/or windows.

SECTION BC 1203 VENTILATION

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, and/or mechanical ventilation in accordance with the *New York City Mechanical Code*. All habitable spaces shall be provided with natural ventilation in accordance with Section 1203.4.

1203.2 Attic spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than $1/150$ of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Exception: The minimum required net free ventilating area shall be $1/300$ of the area of the space ventilated, provided a vapor retarder having a transmission rate not exceeding 1 perm in accordance with ASTM E 96 is installed on the warm side of the attic insulation and provided 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents, with the balance of the required ventilation provided by eave or cornice vents.

1203.2.1 Openings into attic. Exterior openings into the attic space of any building intended for human occupancy shall be covered with corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material that will prevent the entry of birds, squirrels, rodents, snakes and other similar creatures. The openings therein shall be a minimum of $1/8$ inch (3.2 mm) and shall not exceed $1/4$ inch (6.4 mm). Where combustion air is obtained from an attic area, it shall be in accordance with Chapter 7 of the *New York City Mechanical Code*.

1203.3 Under-floor ventilation. The space between the bottom of the floor joists and the earth under any building except spaces occupied by a basement or cellar shall be provided with ventilation openings through foundation walls or exterior walls. Such openings shall be placed so as to provide cross ventilation of the under-floor space.

1203.3.1 Openings for under-floor ventilation. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet (0.09 m² for each 13.9 m²) of crawl-space area. Ventilation openings shall be covered for their height and width with any of the following

materials, provided that the least dimension of the covering shall not exceed 1/4 inch (6.4 mm):

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grills or gratings.
4. Extruded load-bearing vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion-resistant wire mesh, with the least dimension not exceeding 1/8 inch (3.2 mm).

1203.3.2 Exceptions. The following are exceptions to Sections 1203.3 and 1203.3.1:

1. Where warranted by climatic conditions, ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.
2. The total area of ventilation openings is permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is treated with an approved vapor retarder material and the required openings are placed so as to provide cross ventilation of the space. The installation of operable louvers, in accordance with Section 1203.3.1, shall not be prohibited.
3. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cubic foot per minute (cfm) for each 50 square feet (1.02 L/s for each 10 m²) of crawl-space floor area and the ground surface is covered with an approved vapor retarder.
4. Ventilation openings are not required when the ground surface is covered with an approved vapor retarder, the perimeter walls are insulated and the space is conditioned in accordance with the *New York State Energy Conservation Construction Code*.
5. For buildings in areas of special flood hazard, the openings for under-floor ventilation shall comply with Appendix G.

1203.4 Natural ventilation. Natural ventilation of occupiable and habitable space shall be through openings to the outdoors. The openings shall be of a type permitted under Sections 1203.4.1.1, 1203.4.1.2, 1203.4.1.3 and 1203.4.1.4. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

1203.4.1 Ventilation area required. Ventilation areas shall be as set forth in Sections 1203.4.1.1 through 1203.4.1.4.

1203.4.1.1 Occupiable spaces. Where occupiable spaces are not required to be provided with mechanical ventilation in accordance with the *New York City Mechanical Code*, natural ventilation shall be provided in accordance with Section 1203.4.1.1. Openings providing required natural ventilation to occupiable spaces

shall be windows, doors, louvers, skylights or other similar ventilating openings.

Exceptions:

1. Bathrooms and toilet rooms in R or I-1 occupancies shall comply with Section 1203.4.1.3.
2. Kitchenettes in R or I-1 occupancies shall comply with Section 1203.4.1.4.

1203.4.1.1.1 Minimum opening. The minimum openable area to the outdoors shall be 4 percent of the floor area of the occupiable space being ventilated.

1203.4.1.1.2 Adjoining spaces. Where occupiable 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 of 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.

Exception: Exterior openings required for ventilation shall be permitted to open into a thermally isolated sunroom addition or covered patio provided that the openable area between such sunroom addition or covered patio and the interior room shall have an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet (1.9 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

1203.4.1.1.3 Openings below grade. Where openings below grade provide required natural ventilation, the outside horizontal clear space measured perpendicular to the opening shall be one and one-half times 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.

1203.4.1.1.4 Mezzanines. Where an interior balcony or mezzanine opens to form part of another room or space, its area shall be added to the area of the room or space in which it is located to compute the ventilation required for both spaces.

1203.4.1.2 Habitable spaces. All habitable spaces shall be provided with natural ventilation in accordance with Section 1203.4.1.2. Openings providing required natural ventilation to habitable spaces shall be windows and/or glazed doors.

Exception: R-3 occupancies. Openable skylights opening directly to the outer air, transparent or translucent panels, or other natural light-transmitting media may be substituted for window openings in R-3 occupancies provided that they meet the minimum dimensional requirements of Section 1203.4.1.2.1.

1203.4.1.2.1 Minimum opening. The minimum openable area to the outdoors shall be 5 percent of the floor area of the habitable space being ventilated.

Every opening providing required natural ventilation shall be at least 12 square feet (1.1 m²) of glazed area, providing a minimum of 6 square feet (0.56 m²) of openable area.

Exceptions:

1. Where fresh air is furnished in any habitable room or space by mechanical means supplying a minimum of 40 cubic feet per minute (0.02 m³/s), the free openable area of the openings may be reduced to 2½ percent of the floor area but each such opening shall provide not less than 5½ square feet (0.51 m²) of openable area.
2. The minimum free openable area of a mullioned casement window shall be 5½ square feet (0.51 m²), provided that the minimum ratio of floor area to openable area is met.

1203.4.1.2.2 Adjoining spaces. An alcove or room opening off another room or space shall be considered as a separate room in determining its requirements for ventilation.

Exceptions:

1. **Alcoves within R-3 dwelling units.** In R-3 occupancies, where an opening between the alcove and the room or space is at least 80 percent of the area of the common wall and the floor area of the alcove does not exceed twice the area of the opening, the alcove and the room opening into the alcove may be considered as a single space.
2. **Balconies, partially enclosed.** Exterior openings required for ventilation shall be permitted to open upon a partially enclosed balcony or space above a setback when:
 - 2.1. Such balcony or space faces upon a public street, space, alley, park, highway, or right of way; or upon a yard, court, plaza, or space above a setback where such yard, court, plaza, or space above a setback complies with Section 1206;
 - 2.2. The maximum depth of any habitable room is 30 feet (9144 mm) measured from the outer face of the exterior wall forming the partial or full enclosure of the balcony or space;
 - 2.3. The enclosure of the balcony or space is not more than one story in height; and
 - 2.4. The front of a partially enclosed balcony or space above a setback shall be open to the outer air with an open area equal to at least 75 percent of the

floor surface area of such balcony or space.

3. **Balconies, fully enclosed.** Exterior openings required for ventilation shall be permitted to open upon a fully enclosed balcony or space above a setback, including thermally isolated sunroom additions and patio covers, when:
 - 3.1. Such balcony or space faces upon a public street, space, alley, park, highway, or right of way; or upon a yard, court, plaza, or space above a setback where such yard, court, plaza, or space above a setback complies with Section 1206;
 - 3.2. The maximum depth of any habitable room is 30 feet (9144 mm) measured from the outer face of the exterior wall forming the partial or full enclosure of the balcony or space;
 - 3.3. The enclosure of the balcony or space is not more than one story in height;
 - 3.4. The building is Type I or II construction;
 - 3.5. The outer enclosing walls of the balcony or space are glazed with an area at least 50 percent of the area of the interior enclosing walls of such balcony or space; the glazing may be clear plate glass or slow burning plastic;
 - 3.6. At least 50 percent of the glazed area required by Exception 3.5 of this section is openable; and
 - 3.7. No window from any bathroom, toilet room, kitchen or kitchenette shall open on such balcony or space.
4. **Mezzanines and split-level rooms.** Where a habitable mezzanine or portion of a split-level room or space is not directly served by an opening providing natural ventilation in accordance with Section 1203.4.1.2, such mezzanine or space shall open for its full width with no obstruction, except for railings, to an adjoining habitable room which is provided with natural ventilation. The floor area of such mezzanine or portion of the split-level room or space shall be added to the floor area of the adjoining room to compute the required ventilation in accordance with Section 1203.4.1.2.1. The combined space shall also comply with Sections 1203.4.1.2.4 and 1203.4.5.

1203.4.1.2.3 Basements and cellars. Where openings provide natural ventilation to habitable spaces located in basements or cellars, such opening shall also comply with the applicable provisions of Sections 27-2081 through 27-2087 of the *New York City Housing Maintenance Code* and Sections 26(8) and 34 of the *New York State Multiple Dwelling Law*.

1203.4.1.2.4 Maximum depth of room. No part of any room shall be more than 30 feet (9144 mm) from a window opening onto a street or yard unless such room also opens onto a court complying with Section 1206.

Exception: In dwelling units containing more than three habitable rooms in Group R-1 or R-2 occupancies in buildings of Type I or II construction, rooms may be greater than 30 feet (9144 mm) in depth provided that all other requirements of Section 1203.4.1.2 are met and that the required windows are so located as to properly light all portions of the room in accordance with Section 1205.

1203.4.1.3 Bathrooms and toilet rooms in R and I-1 occupancies. Bathrooms or toilet rooms in R or I-1 occupancies shall be provided with natural ventilation in accordance with Section 1203.4.1.3, unless provided with exhaust ventilation in accordance with the *New York City Mechanical Code*. Openings providing required natural ventilation shall be windows.

Exception: Openable skylights may be substituted for windows provided that the bathroom or toilet room is on the top story.

1203.4.1.3.1 Minimum opening. The minimum openable area to the outdoors shall be 5 percent of the floor area of the space being ventilated. Every window or skylight providing required natural ventilation shall be at least 3 square feet (0.28 m²) providing a minimum of 1½ square feet (0.14 m²) of openable area.

1203.4.1.3.2 Adjoining spaces. Natural ventilation for bathrooms and toilet rooms may not be through openings from another room or space.

Exception: A bathroom or toilet room may open onto a partially enclosed balcony or space above a setback conforming with Exception 2 of Section 1203.4.1.2.2.

1203.4.1.3.3 Basements and cellars. Where openings provide natural ventilation to bathrooms or toilet rooms located in basements or cellars, such opening shall also comply with the applicable provisions of Sections 27-2081 through 27-2087 of the *New York City Housing Maintenance Code* and Sections 26(8) and 34 of the *New York State Multiple Dwelling Law*.

1203.4.1.4. Kitchenettes in R and I-1 occupancies. Kitchenettes in R or I-1 occupancies shall be provided with natural ventilation in accordance with Section

1203.4.1.4, unless provided with exhaust ventilation in accordance with the *New York City Mechanical Code*. Openings providing required natural ventilation shall be windows.

Exception: Openable skylights may be substituted for windows provided that:

1. The kitchenette is on the top story;
2. The skylight is 12 inches (305 mm) in its least dimensions;
3. The skylight is at least 4 square feet (0.37 m²) or one-eighth of the area of the kitchenette, whichever is greater; and
4. The skylight provides ventilating openings for at least one-half of its area.

1203.4.1.4.1 Minimum opening. The minimum openable area to the outdoors shall be 5 percent of the floor area of the space being ventilated. Every window or other opening providing required natural ventilation shall be at least 1 foot (305 mm) wide and at least 3 square feet (0.28 m²) in total area, providing a minimum of 1½ square feet (0.14 m²) of openable area.

Exception: Skylights shall comply with the exception of Section 1203.4.1.4.

1203.4.1.4.2 Adjoining spaces. Natural ventilation for kitchenettes shall not be through openings off another room or space.

Exception: A kitchenette may open onto a partially enclosed balcony or space above a setback conforming with Exception 2 of Section 1203.4.1.2.2.

1203.4.1.4.3 Basements and cellars. Where openings provide natural ventilation to kitchenettes less than 80 square feet (7.4 m²) located in basements or cellars, such opening shall also comply with the applicable provisions of Sections 27-2081 through 27-2087 of the *New York City Housing Maintenance Code* and Sections 26(8) and 34 of the *New York State Multiple Dwelling Law*.

1203.4.2 Contaminants exhausted. Contaminant sources in naturally ventilated spaces shall be removed in accordance with the *New York City Mechanical Code*.

1203.4.2.1 Bathrooms. Rooms containing bathtubs, showers, spas and similar bathing fixtures in other than R and I-1 occupancies shall be mechanically ventilated in accordance with the *New York City Mechanical Code*, whether or not they are also provided with natural ventilation.

1203.4.3 Openings on yards or courts. Natural ventilation shall be provided by openings to a public street, space, alley, park, highway, or right-of-way; or upon a yard, court, plaza, or space above a setback where such yard, court, plaza, or space above a setback complies with Section 1206. No such

opening shall be on a recess of less than 6 feet (1829 mm) in width.

Exceptions:

1. Openings providing natural ventilation to habitable spaces located in basements or cellars shall also comply with the applicable provisions of Sections 27-2081 through 27-2087 of the *New York City Housing Maintenance Code* and Sections 26(8) and 34 of the *New York State Multiple Dwelling Law*.
2. A kitchenette, a bathroom, or a water closet compartment may be located on a recess of less than 6 feet (1829 mm).

1203.4.4 Measurement of openings. Dimensions of windows and other openings shall always be taken between stop beads or, if there are no stop beads, between the sides, head, and sill of the sash opening.

1203.4.5 Height of openings. The top of at least one opening providing required natural ventilation to a habitable room or space shall be a minimum of 7 feet (2134 mm) above the floor of the room or space served by the window or opening.

Exception: Mezzanines. Where the required natural ventilation for a habitable mezzanine level is provided by a window(s) on the lower level in accordance with Section 1203.4.1.2.2, Exception 4, and where compliance with Section 1203.4.5 is not feasible on the mezzanine floor, Section 1203.4.5 shall not apply to such mezzanine floor provided that either:

1. Such window(s) is on the opposite wall from the mezzanine, and the top of such window is at least 12 inches (305 mm) above the floor of the mezzanine; or
2. Mechanical ventilation is provided to the mezzanine level in accordance with the *New York City Mechanical Code* capable of providing 2 cubic feet per minute (0.00094 m³/s) of fresh air per square foot (0.09 m²) of floor area of mezzanine.

1203.5 Other ventilation and exhaust systems. Ventilation and exhaust systems for occupancies and operations involving flammable or combustible hazards or other contaminant sources as covered in the *New York City Mechanical Code* or the *New York City Fire Code* shall be provided as required by both codes.

**SECTION BC 1204
TEMPERATURE AND HUMIDITY CONTROL**

1204.1 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive space-heating systems capable of maintaining a minimum indoor temperature as indicated in Table 1204.1 at a point 3 feet (914 mm) above the finished floor. The heating capacity of heat-producing devices and equipment which are contained in the room and in constant use during occupancy may be deducted from the capacity of the heating system. Portable

heating systems shall not be considered as contributing to the capacity of the heating system.

Exception: Where specific rooms or spaces are not listed, the temperature shall be determined by the requirements of the listed space to which they most nearly conform or as determined by the registered design professional.

1204.2 Air conditioning. Interior spaces intended for human occupancy that are provided with air conditioning shall be provided with active or passive systems that are capable of maintaining 78°F (26°C) at 50-percent relative humidity when the outdoor air temperature is 89°F (32°C) and the coincident wet bulb temperature is 73°F (23°C). Interior spaces without air conditioning shall be provided with mechanical or natural ventilation in compliance with other subsections of this code.

1204.3 Freeze protection. All interior spaces shall be provided with active or passive systems or with methods of construction capable of preventing wet piping systems and vessels from freezing at all times, including permanently installed pipe heat tracing systems.

1204.4 System design. The heating system and air-conditioning system, as applicable, shall be designed to provide sufficient capacity to meet the temperature and humidity requirements of Section 1204 when considering the outdoor air ventilation requirements and all losses in the system and ancillary uses, such as domestic hot water, for which the system is used. The system shall be designed and installed to meet all other applicable provisions of this code.

**SECTION BC 1205
LIGHTING**

1205.1 General. Every room and space in every building shall be provided with artificial light in accordance with Section 1205.3. Every habitable room and space shall also be provided with natural light by means of exterior glazed openings in accordance with Section 1205.2.

Exceptions: Artificial light need not be provided in rooms or spaces:

1. Occupied exclusively during the daylight hours between 1 hour after sunrise and 1 hour before sunset, and which are provided with natural light meeting the requirements of Section 1205.2; or
2. With less than 40 square feet (3.7 m²) of floor area if they are used exclusively for storage purposes or for mechanical facilities containing no rotating or moving parts, no combustion equipment, or no other hazardous equipment.

1205.2 Natural light. Every opening providing required natural light shall be so located so as to properly light all portions of the room. Openings providing required natural light shall be windows and/or glazed doors.

Exception: R-3 occupancies. Skylights, opening directly to the outer air, transparent or translucent panels, or other light-transmitting media, may be substituted for window openings in R-3 occupancies provided that they meet the minimum dimensional requirements of Section 1205.2.2.

**TABLE 1204.1
MINIMUM SPACE TEMPERATURE REQUIREMENTS^a**

ROOMS OR SPACES	MINIMUM TEMPERATURE (°F)
Habitable rooms in all buildings	68
Building equipment and machinery rooms	50
Patients' rooms, bathrooms and toilet rooms, stairs and corridors in hospitals and nursing homes	As per the <i>New York State Health Code</i>
Bathrooms and toilet rooms except patients' bathrooms and toilet rooms in hospitals and nursing homes	68
Offices, waiting rooms, art galleries, museums, libraries, meeting rooms, houses of worship, classrooms, auditoriums, lecture halls, nightclubs, restaurants, theatres, locker rooms, dressing rooms, and spaces where persons are engaged in sedentary activities	68
Laboratories, light machine work, product inspections, loft buildings, shops, stores, display rooms, show rooms, sales rooms, and spaces where persons are engaged in moderate physical activities	65
Gymnasias, dance halls, skating rinks, bowling alleys, heavy assembly workrooms or shops, and spaces where persons are engaged in vigorous physical activities	60
Automotive repair shops	50
Storage areas, garages, space where work or process requires a low temperature	None
Hospital operating rooms, and recovery, labor, delivery, and nursery rooms	As per the <i>New York State Health Code</i>
Swimming pools, bath houses, and shower rooms	75

a. Temperatures listed here are the minimum requirements of the department. However, other jurisdictional authorities may have more stringent requirements.

Exceptions:

1. Heating systems are not required when occupancy is seasonal and the rooms or buildings are not occupied between November 1st and May 1st of the following year.
2. Heating systems are not required when the processes or activities normally conducted in the space will generate sufficient heat to maintain the prescribed temperatures during the time of occupancy.
3. Spaces where strict process requirements mandate temperatures other than those cited above shall be exempt from the minimum requirements listed in Table 1204.1.

1205.2.1 Minimum opening. The minimum net glazed area shall not be less than 10 percent of the floor area of the room served. Every opening providing required natural light shall be at least 12 square feet (1.1 m²) of glazed area.

1205.2.2 Adjoining spaces. An alcove or room opening off another room or space shall be considered as a separate room in determining its requirements for natural lighting.

Exceptions:

1. **Alcoves within R-3 dwelling units.** In R-3 occupancies, where an opening between the alcove and the room or space is at least 80 percent of the area of the common wall and the floor area of the alcove does not exceed twice the area of the opening, the alcove and the room opening into the alcove may be considered as a single space.
2. **Balconies, partially enclosed.** Exterior openings required for natural light shall be permitted to open upon a partially enclosed balcony or space above a setback when:
 - 2.1. Such balcony or space faces upon a public street, space, alley, park, highway, or right of way; or upon a yard, court, plaza, or space above a setback where such yard,

court, plaza, or space above a setback complies with Section 1206;

- 2.2. The maximum depth of any habitable room is 30 feet (9144 mm) measured from the outer face of the exterior wall forming the partial or full enclosure of the balcony or space;
- 2.3. The enclosure of the balcony or space is not more than one story in height; and
- 2.4. The front of a partially enclosed balcony or space above a setback shall be open to the outer air with an open area equal to at least 75 percent of the floor surface area of such balcony or space.
3. **Balconies, fully enclosed.** Exterior openings required for natural lighting shall be permitted to open upon a fully enclosed balcony or space above a setback, including thermally isolated sunroom additions and covered patios, when:
 - 3.1. Such balcony or space faces upon a public street, space, alley, park, highway, or right of way; or upon a yard, court, plaza, or space above a setback where such yard,

court, plaza, or space above a setback complies with Section 1206;

- 3.2. The maximum depth of any habitable room is 30 feet (9144 mm) measured from the outer face of the wall forming the partial or full enclosure of the balcony or space;
- 3.3. The enclosure of the balcony or space is not more than one story in height;
- 3.4. The building is Type I or II construction;
- 3.5. The outer enclosing walls of the balcony or space are glazed with an area at least 50 percent of the area of the interior enclosing walls of such balcony or space; the glazing may be clear plate glass or slow burning plastic;
- 3.6. At least 50 percent of the glazed area required by Exception 3.5 of this section is openable; and
- 3.7. No window from any bathroom, toilet room, kitchen or kitchenette shall open on such balcony or space.

4. **Mezzanines and split-level rooms.** Where a habitable mezzanine or portion of a split-level room or space is not directly served by an opening providing natural lighting in accordance with Section 1205.2, such space shall be open for its full width with no obstruction, except for railings, to an adjoining habitable room which is provided with such window or other opening. The floor area of the such mezzanine or portion of the split level room or space shall be added to the floor area of the adjoining room to compute the required lighting in accordance with Section 1205.2.1. The combined space shall also comply with Sections 1205.2.4 and 1205.2.7.

1205.2.3 Basements and cellars.

1205.2.3.1 Adequate adjacent space for multiple dwellings. Where rooms within a dwelling unit in a multiple dwelling are located in a cellar or a basement, such rooms shall have at least one-half of their height and all of their required window surfaces above every part of an “adequate adjacent space.” Such “adequate adjacent space” shall be open to the sky and shall be a continuous surface area not less than 30 feet (9144 mm) in its least dimension abutting at same level or directly below the exterior walls of every part of the basement and cellar portions of such dwelling unit. Such “adequate adjacent space” shall be spaces that are located on the same tax lot or plot as the building or a public street, space, alley, park, highway or right of way and the level of such areas which abut or adjoin the habitable room shall be at least 6 inches (152 mm) below the window sills of any windows.

1205.2.3.2 Other applicable laws. Where openings provide natural lighting to habitable spaces located in

basements or cellars, such opening shall comply with the applicable provisions of Sections 27-2081 through 27-2087 of the *New York City Housing Maintenance Code* and Sections 26(8) and 34 of the *New York State Multiple Dwelling Law*.

1205.2.4 Maximum depth of room. No part of any room shall be more than 30 feet (9144 mm) from a window opening on a street or yard unless such room also opens onto a legal court.

Exception: In dwelling units containing more than three habitable rooms in R-1 or R-2 occupancies in buildings of Type I or II construction, rooms may be greater than 30 feet (9144 mm) in depth provided that all other requirements of Section 1205.2 are met and that the required windows are located so as to properly light all portions of the room.

1205.2.5 Openings on yards or courts. Exterior glazed openings shall open directly onto a public street, space, alley, park, highway, or right-of-way; or upon a yard, court, plaza, or space above a setback where such yard, court, plaza, or space above a setback complies with Section 1206. No such opening shall be on a recess of less than 6 feet (1829 mm) in width.

Exception: Spaces located in basements or cellars shall also comply with Section 1205.2.3.

1205.2.6 Measurement of glazed areas. Window dimensions shall always be taken between stop beads or, if there are no stop beads, between the sides, head, and sill of the sash opening.

1205.2.7 Height of glazed areas.

1205.2.7.1 Only that portion of glazed areas higher than 30 inches (9144 mm) above the floor shall be considered as providing the required natural lighting.

1205.2.7.2 The top of at least one window or other opening providing required natural lighting to a habitable room shall be a minimum of 7 feet (2134 mm) above the floor of the room or space served by the window or opening.

Exception: Mezzanines. Where the required natural lighting for a habitable mezzanine level is provided by a window(s) on the lower level in accordance with Section 1205.2.2, Exception 4, and where compliance with Section 1205.2.7.2 is not feasible on the mezzanine floor, Section 1205.2.7.2 shall not apply to such mezzanine floor provided that either:

1. Such window(s) is on the opposite wall from the mezzanine, and the top of such window is at least 12 inches (305 mm) above the floor of the mezzanine; or
2. Mechanical ventilation is provided to the mezzanine level in accordance with the *New York City Mechanical Code* capable of providing 2 cubic feet per minute (0.00094 m³/s) of fresh air per square foot (0.09 m²) of floor area of mezzanine.

1205.3 Artificial light.

1205.3.1 General. Artificial light shall meet the minimum illumination standards set forth in Section 1205.3. Artificial light shall not exceed maximum energy consumption requirements, if applicable, as required by Section 1301.1.1.

1205.3.2 Rooms and spaces. Artificial light shall be adequate to provide an average illumination of 10 foot-candles (107 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

1205.3.3 Stairways. Stairways within dwelling units and exterior stairways serving a dwelling unit shall have an illumination level on tread runs of not less than 1 foot-candle (11 lux). Stairs in other occupancies shall be governed by Chapter 10.

1205.3.4 Means of egress. The means of egress shall be illuminated in accordance with Section 1006.1. Exterior lights near entranceways to multiple dwellings shall also comply with Section 27-2040 of the *New York City Housing Maintenance Code*.

1205.3.5 Places of assembly. Places of assembly shall be illuminated in accordance with Chapter 10.

1205.4 Reserved.

1205.5 Reserved.

**SECTION BC 1206
YARDS AND COURTS**

1206.1 General. This section shall apply to yards and courts adjacent to exterior openings that provide required natural light or required natural ventilation. Such yards and courts shall be on the same zoning lot as the building. Where such yard or court is wholly or partially on a different tax lot from the exterior opening which the yard or court serves, a light and air easement or restrictive declaration acceptable to the commissioner shall be recorded against the tax lot or lots where such yard or court is located.

1206.2 Yards. Yards shall not be less than the dimensions prescribed by the *New York City Zoning Resolution*† and other applicable laws, rules, and regulations.

1206.2.1 Rear yard access for multiple dwellings. For multiple dwellings, there shall be direct access from the street to every rear yard through a noncombustible 2-hour fire-resistance-rated passage either in a direct line or through a court, except that the passage may be 1-hour fire-resistance-rated for dwellings not exceeding three stories in height and occupied by not more than two families on any story. Such passage shall be at least 36 inches (914 mm) in clear width and 7 feet (2134 mm) in height.

Exceptions: No such passage shall be required for:

1. Buildings of Type IA or IB construction.
2. Buildings not exceeding three stories in height, and occupied by not more than one family on any story nor more than three families in all.

3. Buildings not exceeding two stories in height, and occupied by not more than two families on any story nor more than four families in all.

1206.3 Courts. Courts shall not be less than the dimensions prescribed by the *New York City Zoning Resolution*† and other applicable laws, rules and regulations.

1206.3.1 Court access. Access shall be provided to the bottom of courts for cleaning purposes.

1206.3.2 Air intake. Courts more than two stories in height shall be provided with a horizontal air intake at the bottom not less than 10 square feet (0.93 m²) in area and leading to the exterior of the building unless abutting a yard or public way.

Exception: For multiple dwellings more than two stories in height, an air intake with a vertical cross-sectional area of 21 square feet (1.95 m²) and a least minimum dimension of 3 feet (914 mm) shall be provided at or near the lowest level of any court, in accordance with Section 26(7)(a) of the *New York State Multiple Dwelling Law*.

1206.3.3 Court drainage. The bottom of every court shall be properly graded and drained to a public sewer or other approved disposal system complying with the *New York City Plumbing Code*. For Group R and I-1 occupancies, such grading and drainage shall also comply with Section 27-2027 of the *New York City Housing Maintenance Code*. For R-1, R-2 and I-1 occupancies, such grading and drainage shall also comply with Section 77 of the *New York State Multiple Dwelling Law*.

1206.3.4 Court walls for multiple dwellings. All walls enclosing courts of multiple dwellings shall be of light colored materials or shall be painted a light color.

Exceptions:

1. Outer courts that open to a street.
2. Courts that exceed the minimum dimension set forth in the *New York City Zoning Resolution*† by at least 50 percent.

1206.4 Lighting in courts and yards. In Group I-1, R-1 or R-2 occupancies, all yards and courts shall be artificially illuminated with a minimum intensity of not less than 1 foot-candle (11 lux) measured 30 inches (762 mm) above the floor of the lowest level of such yards or courts.

**SECTION BC 1207
SOUND TRANSMISSION**

1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent dwelling units, between dwelling units and adjacent mechanical equipment spaces, or between dwelling units and adjacent public areas such as halls, corridors, stairs or service areas.

1207.2 Air-borne sound. Walls, partitions and floor/ceiling assemblies separating dwelling units from each other, from public or service areas, from stairs or from mechanical equipment spaces, including boiler rooms, or elevator or other shafts shall have a sound transmission class (STC) for air-borne noise of not less than 50 based upon laboratory measurements made

in accordance with ASTM E 90, or not less than 45 if field tested in accordance with ASTM E 336. Dwelling unit entrance doors shall be installed of assemblies having an STC of not less than 35 based upon laboratory measurements made in accordance with ASTM E 1408. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings.

1207.2.1 Machine and equipment rooms. Elevator machine rooms and machinery spaces containing equipment totaling more than 75 rated h.p. shall not be located vertically or horizontally adjacent to dwelling units unless the total sound power level output of all the equipment in the machine room or space is certified not to exceed the maximum sound power levels of Table 1207.2.1 in any octave band.

1207.3 Structure-borne sound. Floor/ceiling assemblies between dwelling units or between a dwelling unit and a public or service area stair, exterior mechanical equipment, or other mechanical equipment space, including boiler rooms, shall be constructed of assemblies having an impact insulation class (IIC) rating of not less than 50 based upon laboratory measurements made in accordance with ASTM E 492, or not less than 45 if field tested in accordance with ASTM E 1007 in completed construction. See Chapter 30 for additional sound control requirements for elevator machinery.

1207.3.1 Refuse chutes. Metal refuse chutes, metal chute supports, and/or metal chute bracing shall be free of direct contact with the shaft enclosure and the openings provided in the floor construction. Metal chutes shall be resiliently supported at each structural support location. Isolators shall provide a minimum static deflection of 0.3 inches (7.62 mm). All chutes shall be plumb.

1207.4 Field testing. Where conditions indicate that the installed construction or equipment does not meet the noise control prescribed in Section 1207, measurements shall be taken to determine conformance or nonconformance.

**SECTION BC 1208
INTERIOR SPACE DIMENSIONS**

1208.1 Minimum room widths. Habitable spaces, other than a kitchen, shall not be less than 8 feet (2438 mm) in any plan dimension. Kitchens and kitchenettes shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

Exceptions:

1. A room that complies with the requirements for natural light and natural ventilation and in addition has an unobstructed opening of not less than 60 square feet (5.6 m²) into an immediately adjoining room shall not be less than 7 feet (2134 mm) in any plan dimension.
2. A habitable dining space that complies with the requirements for natural light and natural ventilation may be less than 8 feet (2438 mm) in any plan dimension.
3. One-half the number of bedrooms in a dwelling unit containing three or more bedrooms shall not be less than 7 feet (2134 mm) in any plan dimension.
4. A room in a Group R-1 dwelling or sleeping unit shall not be less than 6 feet (1829 mm) in any plan dimension.

1208.2 Minimum ceiling heights. Habitable rooms and spaces shall have a ceiling height of not less than 8 feet (2438 mm). Occupiable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches (2286 mm). Bathrooms, toilet rooms, kitchens in other than I-1 and R occupancies,

**TABLE 1207.2.1
MAXIMUM SOUND POWER LEVEL OUTPUTS FOR MACHINE ROOMS ADJACENT TO DWELLING UNITS**

OCTAVE BANDS, HZ MID-FREQUENCY	MAX. SOUND POWER LEVEL db ^a
	db re10 ⁻¹² Watts
63	88
125	87
250	90
1000	87
2000	86
4000	83
8000	81

a. The maximum sound power levels shall be reduced five db in any octave band where the equipment data indicate pure tone generation. The presence of pure tones may be determined by means of one-third octave band analysis. The criterion for a significant pure tone component shall be an audible pure-tone sound together with an increase of the sound pressure level in the corresponding one-third octave band above the mean of the two adjacent one-third of at least:

Center frequency of one-third octave band:	40/125	160/250	215/500	630/1,000	1,000/10,000
Increase in sound pressure level (db):	6	4	3	2	1½

kitchenettes in I-1 or R occupancies, storage rooms and laundry rooms shall be permitted to have a ceiling height of not less than 7 feet (2134 mm). All measurements shall be taken from the finished floor to the finished underside of the ceiling or ceiling beams.

Exceptions:

1. In one- and two-family dwellings, beams or girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (152 mm) below the required ceiling height, provided that a clear height of 7 feet (2134 mm) is maintained.
2. Habitable rooms in basements of one-family dwellings, including any projecting beams, shall have a ceiling height of not less than 7 feet (2134 mm).
3. Habitable rooms in basements of multiple dwellings may have as many as four beams crossing the ceiling if none of the beams exceeds 12 inches (305 mm) in width or extends below the ceiling more than 6 inches (152 mm).
4. Spaces above and below a mezzanine, other than habitable spaces, shall have a ceiling height of not less than 7 feet (2134 mm).

1208.2.1 Furred ceiling. Any room with a furred ceiling shall be required to have the minimum ceiling height in two-thirds of the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet (2134 mm).

Exception: Minimum ceiling heights of habitable rooms and spaces shall not be less than established in Section 1208.2.

1208.3 Room area. Minimum net floor areas of rooms shall be in accordance with Sections 1208.3.1 and 1208.3.2.

1208.3.1 Habitable rooms and spaces. Every habitable room or space shall have not less than 80 square feet (7.4 m²) in net floor area.

Exceptions:

1. A room that complies with the requirements for natural light and natural ventilation and in addition has an unobstructed opening of not less than 60 square feet (5.6 m²) into an immediately adjoining room shall have not less than 70 square feet (6.5 m²) of net floor area.
2. A habitable dining space, as defined by the *New York City Housing Maintenance Code*, that complies with the requirements for natural light and natural ventilation may have less than 80 square feet (7.4 m²) of net floor area.
3. A room in a Group R-1 dwelling unit shall have not less than 60 square feet (5.6 m²) of net floor area.

1208.3.2 Dwelling units. In a dwelling unit, at least one habitable room shall have not less than 150 square feet (13.9 m²) of net floor area.

Exception: Group R-1 dwelling or sleeping units.

1208.3.2.1 Single room occupancy of a single room. Where a single room within a dwelling unit is used for

single room occupancy, as such term is used in Section 27-2074(e) of the *New York City Housing Maintenance Code*, such room shall have not less than 150 square feet (13.9 m²) of net floor area.

1208.3.2.2 Single room occupancy of a suite of rooms.

Where two or more rooms, joined together and separated from all other rooms within a dwelling unit, are used for single room occupancy, as such term is used in Section 27-2074(e) of the *New York City Housing Maintenance Code*, at least one of such separated rooms shall have not less than 150 square feet (13.9 m²) of net floor area.

1208.4 Reserved.

**SECTION BC 1209
ACCESS TO UNOCCUPIED SPACES**

1209.1 Crawl spaces. Crawl spaces shall be provided with a minimum of one access opening not less than 18 inches by 24 inches (457 mm by 610 mm). All crawl spaces shall have a minimum clear height of 18 inches (457 mm).

1209.2 Attic spaces. An opening not less than 20 inches by 30 inches (508 mm by 762 mm) shall be provided to any attic area having a clear height of over 30 inches (762 mm). A 30-inch (762 mm) minimum clear headroom in the attic space shall be provided at or above the access opening.

1209.3 Mechanical appliances. Access to mechanical appliances installed in under-floor areas, in attic spaces and on roofs or elevated structures shall be in accordance with the *New York City Mechanical Code*.

**SECTION BC 1210
SURROUNDING MATERIALS**

1210.1 Floors. Toilet and bathing room floors shall have a smooth, hard, nonabsorbent surface that extends upward onto the walls at least 6 inches (152 mm).

1210.2 Walls. Walls within 2 feet (610 mm) of urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

Exceptions:

1. Dwelling units.
2. Toilet rooms that are not accessible to the public and which have not more than one water closet.

Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

1210.3 Showers. Shower compartments and walls above bathtubs with installed shower heads shall be finished with a smooth, nonabsorbent surface to a height not less than 70 inches (1778 mm) above the drain inlet.

1210.4 Waterproof joints. Built-in tubs with showers shall have waterproof joints between the tub and adjacent wall.

1210.5 Toilet rooms. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public. In multiple dwellings no toilet room or bathroom shall open onto any kitchen or kitchenette.

SECTION BC 1211 KITCHENS AND KITCHENETTES

1211.1 Sleeping. No kitchen or kitchenette shall be occupied for sleeping purposes.

1211.2 Kitchenettes in multiple dwellings. Except at entrances thereto, every kitchenette in a multiple dwelling shall be surrounded by partitions extending from floor to ceiling, and/or by a soffit dropped 1 foot (305 mm) from the ceiling.

SECTION BC 1212 RODENT-PROOFING

Section 1212.1 General. Rodent-proofing shall be in accordance with Appendix F.

SECTION BC 1213 REFUSE AND RECYCLABLE STORAGE

1213.1 General. Multiple dwellings shall comply with Section 81 of the *New York State Multiple Dwelling Law* and Section 27-2021 of the *New York City Housing Maintenance Code*. Where a room is provided for the storage of refuse and recyclables in a building, such room shall be completely enclosed by construction that has a fire-resistance rating of not less than 2 hours, with self-closing opening protectives having a fire protection rating of not less than 1½ hours. The location of such refuse storage room shall be identified on the construction documents.

1213.2 Compactor. A refuse compacting system shall be provided in multiple dwellings in a Group I-1 or R-2 occupancy that are four or more stories in height and contain 12 or more dwelling units, and in buildings of any size occupied as a Group R-1 multiple dwelling. Such system shall be located within a refuse storage room constructed in accordance with Section 1213.1 or in a refuse chute termination room constructed in accordance with Section 707.13.4. The floor within such room shall be constructed of concrete and shall be sloped to a floor drain connected to the building sewer. A hose connection shall be provided within such room.

1213.3 Refuse chute. A multiple dwelling that is five or more stories in height and that contains more than 12 dwelling units shall be provided with a refuse chute, refuse chute access rooms, and refuse chute termination room constructed in accordance with Section 707.13.

