

2018 Kentucky Building Code

Third Edition

August 2022



**Department of Housing,
Buildings + Construction**

As Adopted by:

Department of Housing, Buildings and Construction

**500 Mero Street
Frankfort, Kentucky 40601
Telephone: (502) 573-0365
FAX: (502) 573-1057**

Kentucky Information on Code Enforcement

The *Kentucky Building Code* is based upon the *2015 International Building Code* published by the International Code Council, Inc., with Kentucky-specific amendments. It provides design and construction standards to ensure the public safety, health, and welfare insofar as they are affected by building construction and to secure safety to life and property from all hazards incident to the occupancy of buildings, structures, or premises. This edition presents the code with changes approved by the Department of Housing, Buildings and Construction through April 2019.

The *Kentucky Building Code* is a “mini/maxi” code, meaning that it is a statewide, uniform, mandatory building code and local governments shall not adopt or enforce any other building code governing commercial construction. The *Kentucky Residential Code* shall govern detached single-family dwellings, two-family dwellings, and townhouses and is adopted by 815 KAR 7:125.

The *Kentucky Building Code* may be amended by the Department of Housing, Buildings and Construction through the regulatory process by considering proposals from code enforcement officials, construction professionals, other interested persons, and organizations. Amendments are discussed during open meetings of the Housing, Buildings and Construction Advisory Committee. Approved amendments by the Department and the Legislative Review Commission are printed in the Kentucky Administrative Register and posted on the Department’s website (dhbc.ky.gov).

SAMPLE ORDINANCE
(CITY/COUNTY) ORDINANCE
Ordinance Number _____

AN ORDINANCE RELATING TO 815 KAR 7:120 KENTUCKY BUILDING CODE and 815 KAR 7:125 KENTUCKY RESIDENTIAL CODE, AS ADOPTED BY THE DEPARTMENT OF HOUSING, BUILDINGS AND CONSTRUCTION OF THE COMMONWEALTH OF KENTUCKY

Be it ordained by the (Governing Board) of the (Name of Jurisdiction) as follows:

WHEREAS, KRS 198B.060(1), requires that all buildings constructed in____ (City/County)_____ shall be built in compliance with the uniform state building code as adopted by the Department of Housing, Buildings and Construction; and

WHEREAS, KRS 198B.060(1) authorizes any city, county or urban county government to require, by ordinance, permits, inspections and certificates of occupancy for single family dwellings; and

WHEREAS, KRS 198B.060(11) requires the local government to employ or contract for or with electrical inspection services; and

WHEREAS, KRS 198B.060(1) and 815 KAR 7:070 require a certified building inspector and other code enforcement personnel as necessary for inspection and code enforcement services;

WHEREAS, KRS 198B.060(18) authorizes each local government to establish a schedule of fees which are designed to cover the cost of the service performed but not to exceed such cost;

NOW, therefore, BE IT ORDAINED by the Fiscal County and/or legislative body of _____(City/County) _____, COMMONWEALTH OF KENTUCKY:

SECTION 1. ADOPTION OF THE KENTUCKY BUILDING CODE.

THAT, the KENTUCKY BUILDING CODE, promulgated in 815 KAR 7:120 and the KENTUCKY RESIDENTIAL CODE promulgated in 815 KAR 7:125 by the Department of Housing, Buildings and Construction, Commonwealth of Kentucky, are to be enforced by _____(City/County) _____of the Commonwealth of Kentucky as if set out at length herein;

THAT, a copy of said Kentucky Building Code and the Kentucky Residential Code is on file in the Office of the _____ County Clerk, and the Clerk shall at all times keep a copy of said building code for reference;

THAT, a copy of this Ordinance shall be transmitted to the Department of Housing, Buildings and Construction of the Commonwealth of Kentucky.

SECTION 2. DESIGNATED ENFORCEMENT OFFICER.

THAT, _____ (Department/Office)_____, shall be designated as the local enforcement agent/agency for said Kentucky Building Code. All building code inspections shall be performed by persons certified by the Kentucky Department of Housing, Buildings and Construction. All electrical inspections shall be performed by persons certified by the Kentucky Department of Housing, Buildings and Construction as an electrical inspector.

SECTION 3. BUILDING INSPECTION PROGRAM.

THAT, pursuant to KRS 198B.060(8), a building inspection program is hereby established in _____(City/County)_____ for application to all buildings subject to 815 KAR 7:120 Kentucky Building Code.

THAT, the building inspection program of _____(City/County)_____ shall include plan review and inspections of structures subject to 815 KAR 7:125 Kentucky Residential Code.

SECTION 4. PERMITS AND FEES.

THAT, the fees for permits and inspections shall be as provided for in the attached schedule.

SECTION 5. INCONSISTENT ORDINANCES REPEALED.

THAT, all ordinances or parts of ordinances in conflict herewith are, to the extent of such conflict, hereby repealed.

SECTION 6. EFFECTIVE DATE.

THAT, this resolution shall take effect and be in full force when passed, published and recorded according to law.

COUNTY JUDGE/EXECUTIVE OR MAYOR

ATTEST:

CITY/COUNTY CLERK

DATE PASSED

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CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 GENERAL

101.1 Title. These regulations shall be known as the *Kentucky Building Code*, hereinafter referred to as “this code.” This edition of the *Kentucky Building Code (KBC)* is the *2015 International Building Code (IBC)* except where specifically amended in these regulations.

101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, and removal of every building or structure or any appurtenances connected or attached to such buildings or structures, whether hereafter erected or, where expressly stated in this code, existing; and whether on land, over water, or on water, permanently moored to land, and substantially a land structure.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress, and their accessory structures shall comply with the *Kentucky Residential Code*, except that, permits, inspections and certificates of occupancy are required only as set forth in local ordinances for single family dwellings per KRS 198B.060.
2. *Farm* dwellings or other *farm buildings* and *structures* incident to the operation and maintenance of the *farm* if the *farm structures* are located outside the boundary of a municipality and are not used in the business of retail trade or used as a place of regular employment for ten (10) or more people or structures used in the storage or processing of timber products.
3. Manufactured homes constructed under Federal HUD standards. However, the exterior electric, water, and sewer connections and additions to the home are not exempt.
4. Swimming pools constructed completely above grade.

101.2.2 Special religious use group. Upon application by a religious group whose religious beliefs would be violated by the application of the *Kentucky Building Code*, *Kentucky Residential Code*, *Kentucky State Plumbing Code*, or any of the standards referenced therein, the *Department* may place the affected *building* into the “Special Religious Use Group” and waive any requirement of the *Kentucky Building Code*, the *Kentucky Residential Code*, the *Kentucky State Plumbing Code*, or any referenced standard. The *Department* may place a project into the Special Religious Use Group only if it finds after a hearing that:

1. The religious group applying for the waiver exists for spiritual and religious purposes and was not formed solely to request this waiver;
2. The religious group’s belief system conflicts with a requirement of the *Kentucky Building Code*, *Kentucky Residential Code*, *Kentucky State Plumbing Code*, or referenced standard;
3. The religious group can demonstrate that the portion of its belief system which conflicts with the *Kentucky Building Code*, *Kentucky Residential Code*, *Kentucky State Plumbing Code*, or referenced standard is historical and not created solely in response to the project for which the waiver is being requested;
4. The waiver is not being requested solely for economic, aesthetic, or convenience reasons;
5. The waiver would not create a situation so unsafe that there is an overriding interest in protecting the health and safety of the general public; and
6. The religious group has taken adequate steps to ensure the project will be brought up to code in the event the religious group no longer owns the building or otherwise no longer qualifies for the waiver.

101.3 Intent. The purpose of this code is to establish the minimum/maximum requirements to provide a reasonable level of safety, public health, and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations. Local governments shall not adopt or enforce any other building code; except that the *Kentucky Residential Code* shall govern detached single-family *dwellings*, two-family *dwellings* and *townhouses*.

101.4.1 Gas. The provisions of the *NFPA 54, National Fuel Gas Code*, shall apply to the installation of gas piping from the point of delivery, gas appliances, and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

101.4.2 Mechanical. The provisions of the *International Mechanical Code* shall apply to the installation, *alterations*, repairs, and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators, and other energy-related systems.

101.4.3 Plumbing. The provisions of the *Kentucky State Plumbing Code* shall apply to the installation, *alteration*, repair, and replacement of plumbing systems, including equipment, appliances, fixtures, fittings, and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. All plumbing installations shall be installed under the supervision of a Kentucky Licensed Master Plumber, and inspected and approved by the state plumbing inspector prior to usage.

101.4.4 Electrical. The provisions of NFPA 70 shall apply to the installation of electrical systems, including *alterations*, repairs, replacement, equipment, appliances, fixtures, fittings, and appurtenances thereto. The inspection of electrical installations shall be performed by a Certified Electrical Inspector pursuant to 815 KAR 35:015.

101.4.5 Fire prevention. The provisions of the *International Fire Code* shall apply to matters affecting or relating to new construction in buildings where specifically referenced in this code, only.

101.4.6 Energy. The provisions of the *International Energy Conservation Code* shall apply to all matters governing the design and construction of *buildings* for energy efficiency in accordance with Chapter 13 of this code.

101.4.7 Existing Buildings. The provisions of the *International Existing Building Code* shall apply to matters governing the repair, *alteration*, change of occupancy, *addition* to, and relocation of existing buildings in accordance with Chapter 34 of this code.

101.5 Fire safety authority. The State Fire Marshal and the local fire code official shall continue to be the authority having *jurisdiction* for enforcement of the *Kentucky Standards of Safety (815 KAR 10:060)* in existing *buildings* not regulated by this code, and for continued fire safety maintenance in *buildings* constructed and approved under this code.

SECTION 102 APPLICABILITY

102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of state or federal law. Other local or state law shall be consulted to determine the existence of other powers given to the *building official*, such as those related to demolition or authority over unsafe *structures* unless a change of occupancy as required by Chapter 34 is made or proposed. Otherwise, this code shall not be cited as authority for upgrading *existing structures* which are not under construction.

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2. Newer editions of any referenced code or standard may be used to meet the intent of the code in lieu of the adopted edition.

102.4.1 Conflicts. Where conflicts occur between provisions

of this code and state law, the provisions of state law shall apply. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.4.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the codes listed in Section 101.4, the provisions of this code or the codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

102.6 Existing Structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the *International Existing Building Code*, or the *Kentucky Standards of Safety (815 KAR 10:060)*. Application of this code to existing *buildings* shall apply as required by Section 3401 when alterations, additions, or changes of occupancy as set forth in Chapter 34 of this code are proposed or occur.

102.6.1 Buildings not previously occupied. A *building* or portion of a *building* that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the *Kentucky Building Code* or *Kentucky Residential Code*, as applicable, for new construction or with any current permit for such occupancy.

102.6.2 Buildings previously occupied. The legal occupancy of any *building* existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the *International Existing Building Code*, or *Kentucky Standards of Safety (815 KAR 10:060)*, or as is deemed necessary by the *building official* for the general safety and welfare of the occupants and the public.

102.6.3 Moved structures. *Buildings* and *structures* moved into or within the Commonwealth shall comply with the provisions of this code for new *buildings* and *structures* and shall not be used or occupied until the certificate of occupancy, if required, has been issued by the *building official*. This provision does not apply to *manufactured homes*.

Exception: Industrialized *buildings* moved into or within the *jurisdiction* meeting the requirements of Chapter 16 of this code.

SECTION 103 DEPARTMENT OF HOUSING, BUILDINGS AND CONSTRUCTION

103.1 Creation of Authority. The *Department of Housing, Buildings and Construction* shall carry out all duties and authority as granted in KRS Chapters 198B, 227, 227A, 234, 236 and 318.

103.2 Appointment. The *building official* shall be certified as required by law and be appointed by the appointing authority.

103.3 Certified inspectors. The local government shall provide at least one Kentucky Certified Building Inspector, Level I, pursuant to 815 KAR 7:070 and employ or contract with a certified electrical inspector in accordance with KRS 198B.060 (1) and (11). The local government shall report the name of all inspectors to the *Department* and the *Department* shall be notified of any changes in inspector personnel.

SECTION 104

DUTIES AND POWERS OF BUILDING OFFICIAL

104.2 Applications and permits. The *building official* shall receive applications, review *construction documents*, and issue *permits* for the erection, *alteration*, and moving of *buildings* and structures, inspect the premises for which such *permits* have been issued and enforce compliance with the provisions of this code.

104.7 Department records. The *building official* shall keep official records of applications received, *permits* and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records as promulgated by the Kentucky Department of Libraries and Archives pursuant to KRS 171.450.

104.10 Modifications. Where there are practical difficulties involved in carrying out the provisions of this code, the *building official* shall have the authority to grant modifications for individual cases, upon application of the *owner* or the *owner's* authorized agent, provided that the *building official* shall first find that special individual reason makes the strict letter of this code impractical, the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, *accessibility*, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the authority having jurisdiction.

104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *building official* shall have the authority to require tests as evidence of compliance to be made at no expense to the *jurisdiction*. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *building official* shall approve the testing procedures. Tests shall be performed by an *approved* agency. Reports of such tests shall be retained by the *building official* for the period required for retention of public records as promulgated by the Kentucky Department of Libraries and Archives pursuant to KRS 171.450.

104.12 Rule-making-authority. By means of the *Department's* appeals procedures, the *Department* may issue

interpretations that shall be binding upon the Appellee and the *building official*. The *building official* shall implement the provisions of this code to secure its intent as determined by the *Department*.

104.13 Nonstructural repairs. Nonstructural *alterations* or repairs that do not adversely affect a structural member having a required *fire-resistance rating*, may be made with the same materials of which the structure was constructed.

104.14 Building size includes fire wall. To determine plan review *jurisdiction* and whether a *registered design professional* is required, the calculation of the total square footage and occupant load for a project shall include areas on both sides of *fire walls*.

104.15 Local plan review and inspection jurisdiction. The local *building official*, having a minimum Kentucky Building Inspector Certification of Level I, shall be responsible for the examination and approval of plans and specifications and the inspections necessary to determine compliance for *buildings* as listed in this section. The determination of *jurisdiction* shall be based upon *occupant load* calculations in accordance with Section 1004 of this code.

104.15.1 Assembly occupancies. All *buildings* classified as assembly occupancies, except churches as indicated in Section 104.15.3, having a capacity that does not exceed 100 persons.

104.15.2 Business occupancies. All *buildings* classified as business occupancies having a capacity that does not exceed 100 persons.

104.15.3 Churches. All *buildings* used for religious or religious fellowship purposes, including family life centers, having a capacity of 400 persons or less; or all *buildings* used for religious or religious fellowship purposes, including family life centers, having 6,000 square feet (558 m²) or less of total floor area.

104.15.4 Factory or industrial occupancies. All *buildings* classified as factory or industrial occupancies having a capacity that does not exceed 100 persons.

104.15.5 Mercantile occupancies. All *buildings* classified as mercantile occupancies having a capacity that does not exceed 100 persons.

104.15.6 Residential, storage or utility occupancies. All *buildings* classified as residential, storage or utility occupancies that do not exceed three stories in height or 20,000 square feet (1860 m²) of total floor area.

104.15.7 Mixed Occupancies. All *buildings* containing more than one occupancy with a total capacity that does not exceed 100 persons.

104.15.8 State owned property. *Buildings* owned by or built on property owned by the Commonwealth shall not be subject to local plan review, inspection, or approval, regardless of size, *occupant load* or occupancy classification.

104.16 State jurisdiction. The *Department* shall have *jurisdiction* to review *construction documents*, issue *permits*, and make inspections to determine compliance with this code for the *buildings* listed in Sections 104.16.1 through 104.16.9, and all *buildings*, except *dwellings* subject to the Kentucky Residential Code (815 KAR 7:125), where no local building inspection program exists as required by Section 104.15 of this code.

104.16.1 Assembly Occupancies. Church *buildings* used for religious or religious fellowship purposes, including family life centers, having a capacity in excess of 400 persons and exceeding 6,000 square feet (558 m²) of total floor area; and all other buildings classified as assembly occupancies having a capacity in excess of 100 persons.

104.16.2 Business occupancies. All *buildings* classified as business occupancies having a capacity in excess of 100 persons.

104.16.3 Educational, high-hazard or institutional occupancies. All *buildings* classified as educational, high-hazard, or institutional occupancies regardless of occupant capacity or building size.

104.16.4 Factory or industrial occupancies. All *buildings* classified as factory or industrial occupancies having a capacity in excess of 100 persons.

104.16.5 Industrialized building systems. All *buildings* classified as industrialized building systems regardless of occupancy size or occupancy classification.

104.16.6 Mercantile occupancies. All *buildings* classified as mercantile occupancies having a capacity in excess of 100 persons.

104.16.7 Other occupancies. All other *buildings* in excess of three stories or 20,000 square feet (1858 m²) of total floor area.

104.16.8 Mixed Occupancies. All *buildings* containing more than one occupancy with a total capacity in excess of 100 persons.

104.16.9 State owned property. *Buildings* owned by or built on property owned by the Commonwealth, regardless of occupancy classification or size.

SECTION 105 PERMITS

105.1 Required. Any *owner* or owner's authorized agent who intends to construct, enlarge, alter, repair, move, or change the occupancy of a *building* or *structure*, or to erect, install, enlarge, alter, repair, remove, convert, or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the *building official* and obtain the required *permit*.

105.2 Work exempt from permit. Exemptions from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or

ordinances of this jurisdiction. *Permits* shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided the floor area is not greater than 120 square feet (11 m²).
2. Fences not over 7 feet (2134 mm) high.
3. Oil derricks.
4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II, or IIIA liquids.
5. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18 925 L) and the ratio of height to diameter or width is not greater than 2:1.
6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or *story* below and are not part of an *accessible route*.
7. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.
8. Temporary motion picture, television, and theater stage sets and scenery.
9. Tents and membrane structures having an area of 400 square feet (37 m²) or less.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment accessory to detached one- and two-family *dwellings*.
12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the *exterior wall* and do not require additional support.
13. Non-fixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

Temporary testing systems: A *permit* shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliances.

2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliances.
2. Portable ventilation equipment.
3. Portable cooling units.
4. Steam, hot, or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any part that does not alter its approval or make it unsafe.
6. Portable evaporative coolers.
7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (0.75 kW) or less.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste, or vent pipe, provided, however, that if any concealed trap, drain, water, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a *permit* shall be obtained and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

105.3 Application for permit. To obtain a *permit*, the applicant shall first file an application in writing on a form furnished by the authority having *jurisdiction* for that purpose. Such application shall:

1. Identify and describe the work to be covered by the *permit* for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address, or similar description that will readily identify and definitely locate the proposed *building* or work. New *buildings* or *additions* shall be accompanied by a copy of the current site survey bearing the seal and signature of a Kentucky Licensed Land Surveyor, except the *building official* may, at the *building official*'s discretion, accept other proof of location.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by *construction documents* and other information as required in Section 107.
5. Be signed by the applicant, or the applicant's authorized agent.
6. Give such other data and information as required by the

building official.

105.8 Local permit limitation. Local *permits* shall not be issued for *buildings* subject to state plan review *jurisdiction* in accordance with Section 104.16 until the *Department* has approved construction to begin.

SECTION 107

SUBMITTAL DOCUMENTS

107.1 General. Submittal documents consisting of *construction documents*, statement of *special inspections*, geotechnical report, and other data shall be submitted in one set with each *permit* application. Additional plans and documents may be required by the Kentucky Division of Plumbing or by local ordinance for *buildings* under local plan review *jurisdiction*. The *construction documents* shall be prepared by and shall bear the required signature and seal of a *registered design professional* where required by Section 122 of this chapter. Where special conditions exist, the *building official* is authorized to require additional *construction documents* to be prepared by a *registered design professional*.

Exceptions:

1. Seals of *registered design professionals* shall not be required for tenant space *alterations* unless the space itself is of a size that would require the *registered design professional* seals if it were a new *building*.
2. The *building official* is authorized to waive the submission of *construction documents* and other data not required to be prepared by a *registered design professional* if it is found that the nature of the work applied for is such that review of *construction documents* is not necessary to obtain compliance with this code.

107.2.3 Means of egress. The *construction documents* shall show in sufficient detail the location, construction, size, and character of all portions of the *means of egress* including the path of the *exit discharge* to the *public way* in compliance with the provisions of this code. In occupancies other than in Groups R-2, R-3 as applicable in Section 101.2, and I-1, the *construction documents* shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

107.3.1 Approval of construction documents. *Construction documents* shall be *approved*, in writing or by stamp, as "Reviewed for Code Compliance" or "Released for Construction." The *construction documents* that have been *approved* or released for construction shall be kept at the site of work and shall be open to inspection by the *building official* or a duly authorized representative.

107.3.4.2 Registered design professional in responsible charge. When Sections 107.1 and 122.1 require *construction documents* to be prepared by a *registered design professional*, the *registered design professional in responsible charge* shall provide on or with the initial application documents presented to the *building official*

the seismic design category, design loads, and other information pertinent to the structural design required by Section 1603 and 1621. If the *registered design professional* determines that the *building* or any component part thereof is exempt from any of the seismic construction provisions of this code, a statement to that effect shall be included with the initial application documents presented to the *building official*.

107.5 Retention of construction documents. The *building official* shall retain *approved construction documents* as promulgated by the Kentucky Department of Libraries and Archives pursuant to KRS 171.450.

SECTION 108 TEMPORARY STRUCTURES AND USES

108.3 Temporary power. Pursuant to 815 KAR 35:015, the certified electrical inspector having *jurisdiction* is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in NFPA 70.

SECTION 109 FEES

109.1 Payment of fees. A *permit* or letter of permission to begin construction shall not be valid until the fees prescribed by the authority having *jurisdiction* have been paid, nor shall an amendment to a *permit* or letter of permission to begin construction be released until the additional fee, if any, has been paid.

109.2 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical, or plumbing system before obtaining the necessary *permits* may be subject to penalties established in KRS Chapters 198B, 227, 227A, 234, 236 and 318. The fee shall be in addition to and equal to the amount of the original

109.3 Related fees. The payment of the fee for the construction, *alteration*, or removal for work done in connection to or concurrently with the work authorized by a *building permit* shall not relieve the applicant or holder of the *permit* from the payment of other fees that are prescribed by law.

109.4 Refunds. The *building official* is authorized to establish a refund policy.

109.5 through 109.6. Sections 109.5 through 109.6 of the 2015 IBC shall be DELETED in their entirety.

SECTION 110 INSPECTIONS

110.3.8 Other inspections. In addition to the inspections specified in Sections 110.3.1 through 110.3.7, the *building official* is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the authority having *jurisdiction*.

110.5.1 Request for final inspection. Upon completion of the *building*, the *owner* or agent of the *facility* shall request a final inspection. The *building official* shall set a time for the inspection and notify the *owner* or agent. If substantial compliance with the *approved construction documents* and *permit* has been achieved, a certificate of occupancy shall be issued as described in Section 111. If compliance has not been achieved, violations of the *approved construction documents* and *permit* shall be noted and immediately communicated to the *owner*, agency, or other *person* holding the *permit* and the *fire code official*. Corrections to any deficiencies noted upon inspection shall be the responsibility of the *owner* or *permit* holder.

110.7 Industrialized building system inspections. The inspection of all *buildings* classified as industrialized building systems, regardless of size or occupancy classification, shall be in accordance with this section.

110.7.1 Off-site construction. In-plant inspections in production and manufacturing facilities for industrialized building systems as well as on-site inspection for all industrialized building systems, except those classified as detached one- and two-family *dwelling*s as indicated in Section 110.7.2 shall be conducted by the *Department* or its authorized agent. The authority having *jurisdiction* shall be responsible for inspection of these systems for zoning, water supply, and sewage disposal, and other applicable local ordinance purposes. *Approved* industrialized buildings shall be acceptable in all *jurisdictions* as meeting the requirements of the *Kentucky Building Code*.

110.7.2 On-site construction. On-site construction related to *modular home* or one- and two-family *dwelling* installations may be permitted and inspected by the *building official*. The *building official* shall be responsible for the inspection of the foundation system, placement of the *building*, connections of the unit, final set-up of the unit, and the issuance of the certificate of occupancy.

110.8 Fire code official inspections. The *building official* shall cooperate with the *fire code official* by allowing the *fire code official* to inspect all *buildings* during construction. The *building official* shall consider recommendations made by the *fire code official* relating to fire safety in construction of a *building*, and if a certificate of occupancy is issued contrary to the written recommendations, the *building official* shall give written notification of the decision to the *fire code official* immediately.

**SECTION 111
CERTIFICATE OF OCCUPANCY**

111.2 Certificate issued. After the *building official* inspects the *building* or *structure* and does not find violations of the provisions of this code or other applicable law, the *building official* shall issue a certificate of occupancy that contains the following:

1. The *buildings permit* number.
2. The address of the structure.
3. The name and address of the *owner* or the owner's authorized agent.
4. A description of that portion of the *structure* for which the certificate is issued.
5. A statement that the described portion of the *structure* has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the *building official*.
7. The edition of the code under which the *permit* was issued.
8. The use and occupancy, in accordance with the provisions of Chapter 3.
9. The type of construction as defined in Chapter 6.
10. The design *occupant load*.
11. If an *automatic sprinkler system* is provided, whether the sprinkler system is required.
12. Any special stipulations and conditions of the *building permit*.

**SECTION 112
SERVICE UTILITIES**

112.1 Connection of service utilities. A *person* shall not make connections from a utility, source of energy, fuel, or power to any *building* or system that is regulated by this code for which a *permit* is required, until released by the *building official* and applicable licensed or certified *persons* listed in Section 112.4.

112.2 Temporary connection. The *building official* and applicable licensed or certified *persons* listed in Section 112.4 shall have the authority to authorize the *temporary* connection of the *building* or system to the utility source of energy, fuel, or power.

112.3 Authority to disconnect service utilities. The *building official* and applicable licensed or certified *persons* listed in Section 112.4 shall have the authority to authorize disconnection of utility service to the *building, structure, or system* regulated by this code and the referenced codes and standards set forth in Section 101.4 in case of emergency where necessary to eliminate an immediate hazard to life or property or where such

utility connection has been made without the approval required by Section 112.1 or 112.2. The *building official* or applicable licensed or certified *persons* listed in Section 112.4 shall notify the serving utility, and wherever possible the *owner* and occupant of the *building, structure, or service system* of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the *owner* or occupant of the *building, structure, or service system* shall be notified in writing, as soon as practical thereafter.

112.4 Enforcement by local government. The electrical system shall be inspected and *approved* by a certified electrical inspector pursuant to KRS 227.489 and 815 KAR 35:015. The plumbing system shall be inspected and *approved* pursuant to KRS Chapter 318 and the *Kentucky State Plumbing Code* as set out in 815 KAR Chapter 20.

**SECTION 113
APPEALS**

113.1 General. All appeals from the decisions of *building officials* shall be conducted in accordance with the appeals provisions of KRS 198B.070. Where a local appeals board exists, a party must first appeal to the local appeals board when aggrieved by a decision of the local *building official*. The *Department* shall hear appeals directly from a party aggrieved by the decision of an agent of the *Department*.

113.2 Appeal by fire code official. Decisions rendered by the *building official* with respect to enforcement of the *Kentucky Building Code* may be appealed by the local *fire code official* of the *jurisdiction* if the *fire code official* is aggrieved by that decision.

113.3 Local appeals board. Local appeals boards may be appointed to hear appeals from the decisions of the local *building official* in accordance with the provisions of Sections 113.3.1 through 113.3.8.

113.3.1 Appointment. The mayor or county judge executive of a local government that is enforcing the *Kentucky Building Code* may, upon approval of the local legislative body, appoint a local appeals board, consisting of at least five technically qualified *persons* with professional experience related to the *building* industry, three of which shall not be employees of the local government, to hear appeals from the decisions of the local *building official* regarding *building* code requirements.

113.3.2 Cooperative agreements. Local governments that are enforcing the *Kentucky Building Code* may cooperate with each other and provide a local appeals board and shall adhere to the provisions of KRS Chapter 65 when entering into a cooperative agreement.

113.3.3 Disqualification of member. Local *building officials* or employees of a local inspection department shall not sit on a local appeals board if the local board is hearing an appeal to a decision rendered by the local department. A member of a local appeals board shall not hear an appeal in a case in which the member has a financial interest.

113.3.4 Right to appeal. Any party to a decision by the local *building official* may appeal that decision to the local appeals board. Upon receipt of an appeal from a qualified party, the local appeals board shall convene a hearing to consider the appeal within 15 days of receipt.

113.3.5 Notice of meeting. All parties to the appeal shall be notified of the time and place of the hearing by letter sent by certified mail not later than 10 days prior to the date of the hearing.

113.3.6 Board decision. The local appeals board shall render a decision within five working days after the hearing. The local appeals board may uphold, amend, or reverse the decision of the local *building official*, and there shall be no appeal from the decision of the local appeals board other than by appeal to the *Department*.

113.3.7 Open hearing. All hearings before the local appeals board shall be open to the public. The appellant, the appellant's representative, the *building official*, and all persons whose interests are affected shall be given an opportunity to be heard.

113.3.7.1 Procedure. The local appeals board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence but shall mandate that only relevant information be received.

113.3.8 Local appeals board remedies. The local appeals board shall modify or reverse the decision of the *building official* by a concurring vote of a majority of voting members after quorum is established.

113.4 Appeals to the State. Application for appeal by a property owner may be made when it is claimed that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, an equally good or better form of construction can be used, or that the *building official* has refused to grant a modification to the provisions of this code covering the manner of construction or material to be used in the erection, *alteration*, or *repair* of a *building* or *structure*. All appeals shall be submitted in writing.

113.4.1 Application procedure. Appeals to the *Department* shall be in writing and shall be addressed to the *Commissioner* of the *Department of Housing, Buildings and Construction*, 500 Mero Street, Frankfort, Kentucky 40601; Attention: Appeals. The appeal shall include citations of those provisions of the *Kentucky Building Code*, which are at issue, an explanation of why the decision of the state *building official* or local *building official* relative to those provisions is being contested, and a copy of the decision rendered by the local appeals board, if any.

113.4.2 Investigation of appeal. The *Commissioner* shall immediately notify the *Department* or the five-member committee authorized by the *Commissioner* when an appeal is received. The *Commissioner* or a designated employee of the *Department* shall then investigate the evidence pertaining

to the appeal and, based on the results of the investigation, make written recommendations to the *Department* or committee on the disposition of the case in question, within 30 days.

113.4.3 Employee deferral. Employees of the *Department* shall not investigate or make recommendations on an appeal to his or her decision, but shall defer in this case to employees who are not party to the decision that led to the appeal.

113.4.4 Investigative authority. In conducting an investigation, the *Commissioner*, or the designated representatives acting for the *Department*, shall have the authority to administer oaths and affirmations, issue subpoenas authorized by law, rule upon offers of proof and receive relevant evidence, take or cause depositions to be taken, regulate the course of any hearings they may schedule, and hold conferences for the settlement or simplification of the issue by consent of the parties.

113.4.5 Administrative hearing. If the issue has not been settled by agreement of the parties within limitations set by Section 113.4.2, the *Department* shall schedule an administrative hearing on the matter in accordance with KRS Chapter 13B. The cost of any direct appeal to the *Department* (where there is no local appeals board established) shall be borne by the local government. The *Department* shall calculate the actual cost of processing the appeal and bill the local government at the conclusion of all proceedings.

113.4.6 Judicial appeals. Final orders of the *Department* are appealable to the Circuit Court in the county in which the property is located.

SECTION 114 VIOLATIONS

114.4 Violation penalties. Any *person* who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters, or repairs a *building* or *structure* in violation of the approved *construction documents* or directive of the *building official*, or of a *permit* or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by KRS 198B.990 and other applicable law.

SECTION 115 STOP WORK ORDER

115.4 Limitation on changes. No inspector shall be authorized to require changes on-site that are contrary to the approved *construction documents*. If an inspector finds a code discrepancy in an on-site inspection, the inspector shall refer the matter to the *building official* having *construction document* review responsibility who shall require corrections if the code so requires.

**SECTION 116
UNSAFE STRUCTURES AND EQUIPMENT**

116.6 Unsafe conditions in existing buildings. Unsafe conditions shall be referred to the *fire code official* for complaints regarding unsafe conditions in *buildings* or portions thereof, which are not under construction or under the *jurisdiction* of the *building official*.

**SECTION 117
CABINET FOR HEALTH AND FAMILY SERVICES
(CHFS) REGULATED BUILDINGS**

117.1 Hospitals, nursing homes, and institutional (Groups I-1 and I-2) facilities. *Hospitals, nursing homes,* and other institutional (Groups I-1 and I-2) facilities licensed by the Cabinet for Health and Family Services (CHFS) and inspected under contract with CHFS by the *Department* shall comply with the institutional group requirements specified in Chapter 4, including specific references to other sections of this code and the applicable provisions of NFPA 101.

117.2 Day care centers. Existing day care centers that comply with the provisions of NFPA 101 and as approved by the State Fire Marshal shall be deemed to satisfy the life safety requirements of this code.

Exception: New day care centers governed by Section 427 of this code and other similar care facilities licensed by CHFS.

**SECTION 118
PROOF OF INSURANCE**

118.1 Compliance with law. The issuance of a *building permit* shall be contingent upon presentation of proof that all contractors and subcontractors employed or that will be employed in the construction, *alteration,* or *repair* under the *permit* are in compliance with the applicable Kentucky worker's compensation and unemployment insurance law.

118.2 General applicability. Compliance with this section shall be achieved by presenting certificates, or other forms approved by law, to the *building official* issuing the *permit*.

**SECTION 119
POSTING SIGNS**

119.1 Posting. All signs required by this code to be posted shall be furnished by the *owner* and shall be of a permanent design. The signs shall not be removed or defaced. Required signs, which are lost, removed, or defaced shall be immediately replaced.

**SECTION 120
EFFECTIVE DATES**

120.1 General. The *building official* shall accept plans in compliance with the requirements of this code. All plans submitted on or after August 1, 2019 shall be designed and submitted to conform to this code.

**SECTION 121
PLAN REVIEW AND INSPECTION FEES FOR THE
DEPARTMENT OF HOUSING, BUILDINGS AND
CONSTRUCTION**

121.1 General. A *permit* to begin work for new construction, *alteration,* removal, or other *building* operations shall not be issued until the fees prescribed by law are paid to the *Department,* if applicable, and to the local building department. If an amendment to a *permit* necessitates an additional fee because of an increase in the estimated cost of the work involved, the *permit* shall not be *approved* until the additional fee has been paid.

121.2 Special fees. Payment of fees for construction, *alteration,* or removal and for all work done in connection with or concurrently with the work contemplated by a *building permit* shall not relieve the applicant or holder of the *permit* from the payment of other fees that may be prescribed by law or ordinance such as water taps, sewer connections, electrical *permits,* erection of signs, and display structures, *marquees* or other appurtenant *structures,* or fees of inspections or certificates of occupancy or other privileges or requirements established by law.

121.3 State jurisdiction. The fees for plan review and inspection functions required by the *Department* shall be as prescribed in Sections 121.3.1 through 121.3.18, as applicable.

121.3.1 Fee schedule. The fees shall be paid in accordance with Table 121.3.1.

121.3.1.1 Fast-track elective. For *permit* applicants seeking early site and foundation approval prior to full review of the complete set of *construction documents,* the fee shall be that as calculated from Table 121.3.1 plus 50 percent of the full fee. The additional 50 percent fee shall not be less than \$400 and not more than \$3,000. The entire fee shall be paid at the time of the initial plan submission to the *Department.*

**TABLE 121.3.1
DEPARTMENT OF HOUSING, BUILDINGS AND
CONSTRUCTION FEE SCHEDULE**

OCCUPANCY TYPE	COST PER SQ FOOT
Assembly	16 cents
Business	15 cents
Day care centers	15 cents
Educational	15 cents
High hazard	16 cents
Industrial factories	15 cents
Institutional	16 cents
Mercantile	15 cents
Residential	15 cents
Storage	15 cents
Utility and Miscellaneous	13 cents
Production greenhouses	10 cents

121.3.2 Submission of plans and fees. All plans and specifications required to be submitted to the *Department* shall be accompanied by the applicable fee as set forth herein, rounded to the nearest dollar.

121.3.3 Method of payment. All fees shall be submitted to the *Department*. Checks shall be made payable to the Kentucky State Treasurer.

121.3.4 Construction approval. Approval for construction shall not be issued by the *Department* until all required fees have been paid.

121.3.5 New construction. The plan review fees of the *Department* for new *buildings* shall be calculated by multiplying the total *building area* under construction by the cost per square foot of each occupancy type as listed in Table 121.3.1. The total square footage shall be determined by the outside *dimensions* of the *building*. The minimum fee for review of plans under this section shall be \$285. The fee for *buildings* with multiple or mixed occupancies may be calculated using the cost per square foot multiplier of the predominant use.

121.3.6 Additions to existing buildings. Plan review fees for *additions* to existing *buildings*, which do not require the entire *building* to conform to this code, shall be calculated in accordance with Table 121.3.1 by the measurement of the square footage of the *addition*, as determined by the total *building area* of the *addition*. Minimum fee for review of plans under this section shall be \$285.

121.3.7 Change in use. Plan review fees for existing buildings in which the group or occupancy type is changed shall be calculated in accordance with Table 121.3.1 by using the total square footage of the entire building or structure under the new occupancy type as determined by the total building area of that portion affected by the change of use. Minimum fee for review of plans under this section shall

be \$285.

121.3.8 Alterations and repairs. Plan review fees for *alterations* and repairs not otherwise covered by this fee schedule shall be calculated by multiplying the cost for the *alterations* or repairs by 0.0030; or calculated by multiplying the total area being altered or repaired by the cost per square foot of each occupancy type as listed in Table 121.3.1, whichever is less. The total square footage shall be determined by the outside *dimensions* of the area being altered or repaired. The minimum fee for review of plans under this section shall be \$285.

121.3.9 Specialized fees. In addition to the above fees, the fees in Table 121.3.9 shall be applied for the specialized plan reviews listed.

**TABLE 121.3.9
AUTOMATIC SPRINKLER PLAN REVIEW FEE
SCHEDULE**

NUMBER OF SPRINKLERS	FEE
4 – 025	\$150
026-100	\$200
101-200	\$250
201-300	\$275
301-400	\$325
401-750	\$375
OVER 750	\$375 plus 30 cents per sprinkler over 750

121.3.10 Fire detection system review fee. Up to 20,000 square feet shall be \$275; over 20,000 square feet shall be \$275 plus \$30 for each additional 10,000 square feet in excess of 20,000 square feet.

121.3.11 Standpipe plan review fee. \$275 (combination standpipe and riser plans shall be reviewed under the automatic sprinkler review fee schedule).

121.3.12 Carbon dioxide suppression system review fee. Up to 200 pounds of agent shall be \$275; over 200 pounds of agent shall be \$275 plus 5 cents per pound in excess of 200 pounds.

121.3.13 Clean agent suppression system review fee. Up to 35 pounds of agent shall be \$275; over 35 pounds shall be \$275 plus 10 cents per pound in excess of 35 pounds. The fee for gaseous systems shall be 10 cents per cubic foot and not less than \$150.

121.3.14 Foam suppression system review fee. 50 cents per gallon of foam concentrate where the system is not part of an *automatic sprinkler system*. Foam suppression system plans that are submitted as part of an *automatic sprinkler system* shall be reviewed under the *automatic sprinkler system* review fee schedule. The fee for review of plans under this section shall not be less than \$275 or more than \$1,500.

121.3.15 Commercial range hood review fee. \$225 per hood including range hood extinguishing system review when those plans are submitted together.

121.3.15.1 Commercial range hood extinguishing system review fee. \$150 per system when the range hood extinguishing system is submitted separate from the range hood system.

121.3.16 Dry chemical system review fee (except range hoods). Up to 30 pounds of agent shall be \$275; over 30 pounds of agent shall be \$275 plus 25 cents per pound in excess of 30 pounds.

121.3.17 Spectator seating system review fee. Seating systems having up to 1000 seats shall be \$275; over 1000 seats shall be \$275 plus \$20 for each additional 200 seats in excess of 1000 seats. The total number of seats in seating systems without dividing arms shall be calculated at 18 inches per seat as required by Section 1004.4 of this code.

121.3.18 Consumer Fireworks Retail Fee. For tents, temporary structures, or buildings used for the retail sales of consumer fireworks, the fees shall be:

121.3.18.1 Temporary Tents and Structures: \$125

121.3.18.2 Store: \$250

121.3.18.3 Permanent Building: 13 cents per square foot.

121.4 Local jurisdiction. Each local government shall adopt its own schedule of reasonable fees for *building permits* and the performance of functions under this code. The fees shall be designed to cover fully the cost of the service performed but shall not exceed the cost of the service performed.

121.5 Accounting. The *building official* shall keep an accurate account of all fees collected.

SECTION 122 REGISTERED DESIGN PROFESSIONALS

122.1 General. All *construction documents* required by Section 107.1 are to be prepared by a *registered design professional*, and bear the required signature and seals as indicated in Table 122.1. Table 122.1 is a summary of KRS 322 and KRS 323 that establishes, based on use and occupancy of a *building* or *structure*, when a *registered design professional* is required. Where there is a conflict between Table 122.1 and KRS 322 or KRS 323, the KRS shall apply.

Exception: Seals of *registered design professionals* shall not be required for tenant space *alterations* unless the space itself is of a size that would require the seal if it were a new *building*. This exception does not apply to the initial tenant fit-up.

122.1 Special inspections. Special inspections shall be made as required by and in accordance with Chapter 17.

122.2.1 Code assurances. If construction began on a *building* prior to approval by the *building official* or the construction does not conform to the approved *construction documents* or the standards required by this code, the *building official* may require special inspections and reports if necessary to ensure safety.

122.2.2 Fees and costs. Fees and costs related to the performance of special inspections by professional services shall be borne by the owner.

122.3 Licensed HVAC contractors. All work involving HVAC shall comply with KRS Chapter 198B and 815 KAR Chapter 8. The *building official* may require proof of licensure when making inspections.

122.4 Quality work. All work shall be conducted, installed, and completed in a workmanlike and acceptable manner so as to ensure the results intended by this code.

**TABLE 122.1
REGISTERED DESIGN PROFESSIONAL SEALS**

NOTE: Projects involving new *structures*, *additions* or renovations require *registered design professional* services when the *building* size or calculated *occupant load* exceeds the limits indicated by Table 122.1.

GROUP CLASSIFICATION OR SPECIAL USE	BUILDING SIZE ^e (square feet)	CALCULATED ^e OCCUPANT LOAD	ARCHITECT ^h	ENGINEER	EITHER	NONE
Assembly	—	100 ^a	X	X	—	—
Business	10,000	100	X	X	—	—
Educational	Any size	Any size	X	X	—	—
Factory & industrial	20,000	—	—	—	X	—
High hazard	Any size	Any size	—	—	X	—
Institutional	Any size	Any size	X	X	—	—
Mercantile	—	100	X	X	—	—
Residential	12 <i>dwelling units</i>	50 ^g	X	X	—	—
Storage ^e	20,000	—	—	—	X	—
Public works projects	Any	Any	—	—	X	—
SPECIAL USES						
Church buildings ^f	6,000	400	X	X	—	—
Day care	3,500 ^b	100 ^b	X	X	—	—
Farm Structures	Any size	Any size	—	—	—	X
Mixed uses	Note c	Note c	X	X	—	—
Smaller buildings	Note d	Note d	—	—	—	X
Non-building structures	—	—	—	—	—	X

For SI: 1 square foot = 0.093 m².

- a. Assembly uses having 700 square feet to 1,500 square feet may actually have calculated *occupant load* exceeding 100 persons depending on the specific use of assembly areas.
- b. Net floor area occupied by clients is 35 square feet per client and calculated *occupant load* is actually client load.
- c. *Buildings* having two or more different uses require both architect and engineer when the combined calculated *occupant load* exceeds 100 persons, unless the mixed uses are exclusively factory, high hazard or storage.
- d. Smaller *buildings* of any use having total area or calculated *occupant load* less than specified for that use do not require *registered design professional* services.
- e. Projects involving *additions* to existing *buildings* shall include existing *building areas* and/or calculated *occupant loads* when determining requirements for *registered design professional* services. Use the actual *occupant load* if it is greater than the calculated *occupant load*.
- f. No architect or engineer is required unless the church *building* size reaches 6,000 total square feet or a calculated *occupant load* of 400 persons.
- g. The number of *dwelling units* shall be the determining factor. However, for a dormitory or boarding home, the *occupant load* shall be determined by area or actual *occupant load*.
- h. No architect is required for an *agritourism building* built prior to December 31, 2016, unless the *agritourism building* size exceeds 6,000 total square feet or a calculated *occupant load* in excess of 400 persons.

CHAPTER 2 DEFINITIONS

SECTION 201 GENERAL

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the International Energy Conservation Code, NFPA 54, National Fuel Gas Code, International Fire Code, International Mechanical Code or Kentucky Plumbing Code, such terms shall have the meanings ascribed to them as in those codes.

The following definitions are hereby added to Chapter 2 of the 2015 International Building Code. Where terms appear in both the IBC and this code, the corresponding definitions in this code shall supersede.

AGRITOURISM ACTIVITY. Any activity carried out on a farm, ranch, agricultural operation, horticultural operation, or agribusiness operation; and allows or invites participants to view or participate in activities for recreational, entertainment, or educational purposes. Qualifying activities may include farming, ranching, historic, cultural, civic, or ceremonial activities, including but not limited to weddings and ancillary events; harvest-your-own operations; farmers' markets; or natural resource-based activities. The activities may qualify as agritourism activities whether or not a participant pays to view or to participate in the activity.

AGRICULTURAL BUILDING. A *building* or *structure*, other than one exempt from the code as a *building* or *structure* incident to the operation of a *farm* under Section 101.2, utilized to store farm implements, hay, feed, grain or other agricultural or horticultural products or to house poultry, livestock or other farm animals. Such *structure* shall not include *habitable* or *occupiable spaces*, spaces in which agricultural products are processed, treated or packaged, nor shall an *agricultural building* be a place of occupancy by the general public.

AGRITOURISM BUILDING. Any building or structure or any portion thereof used for *agritourism activity*.

AIR CURTAIN. A device, installed at the building entrance that generates and discharges a laminar air stream intended to prevent the infiltration of external, unconditioned air into the conditioned spaces, or the loss of interior, conditioned air to the outside.

APPROVED FABRICATOR. An established and qualified person, firm, or corporation approved by the *building official* or the *registered design professional in responsible charge*, pursuant to Chapter 17 of this code.

BARRIER. A fence, a *wall*, a building wall, or combination thereof, which completely surrounds the *swimming pool* and obstructs access to the *swimming pool*.

BED AND BREAKFAST ESTABLISHMENT. A *building* occupied as a one-family *dwelling* unit, but which also has

guestrooms or suites, which are used, rented, or hired out to be occupied or which are occupied for sleeping purposes by persons not members of the single-family unit. The *building* shall be known as either a *bed-and-breakfast inn* or a *bed-and-breakfast home*.

BED AND BREAKFAST HOME. A *bed-and-breakfast establishment* having five or less guestrooms or suites shall comply with the requirements of this code applicable to Use Group R-3 and with Section 428.1.

BED AND BREAKFAST INN. A *bed-and-breakfast establishment* having six or more guestrooms or suites shall comply with the requirements of this code applicable to Use Group R-1.

BUILDING. Any combination of materials, whether portable or fixed, which comprises a *structure* or non-mine underground area affording facilities or shelter for any human occupancy, whether infrequent or regular. The word "*building*" shall be construed wherever used herein as if followed by the words "or part or parts thereof, and all equipment therein," unless the context clearly requires a different meaning. "*Building*" shall also mean *swimming pools* constructed below grade on site, but not *swimming pools* assembled above grade on site. "*Building*" shall not mean a mobile home, *manufactured home*, farm dwelling or other farm buildings and structures incident to the operation and maintenance of the *farm*, if such farm structures are located outside the boundary of a municipality and are not used in the business of retail trade or used as a place of regular employment for ten (10) or more people or structures used in the storage or processing of timber products. For application of this code, each portion of a *building* which is completely separated from other portions by *fire walls* complying with Section 706 of this code shall be considered as a separate building.

BUILDING OFFICIAL. A building inspector certified by the *Department* in accordance with 815 KAR 7:070 and designated by the *Department* or by a local government as an enforcement official for the Kentucky Building Code pursuant to KRS Chapter 198B.

CERTIFIED TENT. A tent, canopy, or membrane structure that has been proven by engineering calculations to be capable of withstanding a specific, designated minimum wind speed when installed according to *construction documents* and manufacturer's written instructions.

COMMERCIAL GREENHOUSE. Greenhouse structures, open to the public, used for growing and display, research, or sales of horticultural products and supplies.

COMMISSIONER. The Commissioner of the Department of Housing, Buildings and Construction.

CONSUMER FIREWORKS RETAIL SALES FACILITY (CFRS FACILITY). A permanent or *temporary building or structure, CFRS stand, tent, canopy, or membrane structure* that is used primarily for the retail display and sale of consumer fireworks to the public as per Section 3.3.29.1 of NFPA 1124 listed in Chapter 35.

CONSUMER FIREWORKS RETAIL SALES (CFRS) STAND. A *temporary or permanent building or structure* that has a *floor area* not greater than 800 ft² (74 m²), other than *tents, canopies, or membrane structures*, that is used primarily for the retail display and sale of consumer fireworks to the public as per Section 3.3.19 of NFPA 1124 listed in Chapter 35.

CONTROLLED ENVIRONMENT AGRICULTURE FACILITY. A facility, not open to the public, that utilizes a technologically advanced form of hydroponic or soilless based production that includes a combination of engineering, plant science, and computer-managed greenhouse control technologies in growing spaces and all connected sorting, packing, and storage areas to allow complete and stable control of the plant environment including temperature, light, and carbon dioxide.

DAY CARE CENTER, TYPE I. Any facility that regularly provides day care for thirteen (13) or more clients. If preschool children of any day care staff also receive care in the facility, they shall be included in the number of day care clients for which the facility is licensed.

DAY CARE CENTER, TYPE II. Any home or *dwelling unit* that regularly provides care, apart from parents for seven (7), but not more than twelve (12) clients. The director's own preschool children shall be included in the number of clients for which the home is licensed. The facility shall be occupied by a center staff member as their principle place of residence.

DEPARTMENT. The Department of Housing, Buildings and Construction.

DEVELOPED SPACE. *Subterranean space* that has been altered for the use of advanced industrial capability, technological sophistication, or economic productivity.

ENGINEERED TENT. A *tent, canopy, or membrane structure* that has been fully engineered to meet code requirements for design wind loads when installed according to *construction documents* and manufacturer's written instructions.

FARM. Property having a bona fide agricultural or horticultural use as defined by KRS 132.010(9) and (10) which is qualified by and registered with the property valuation administrator in the county in which the property is located.

FIRE AREA. The aggregate *floor area* enclosed and bounded by *fire walls, fire barriers, exterior walls, or horizontal assemblies of a building*.

FIRE CODE OFFICIAL. The State Fire Marshal, fire chief, or other enforcement officer designated by the appointing authority of the *jurisdiction* for the enforcement of the provisions of KRS 227.300 and the *Kentucky Standards of Safety* (Fire Prevention Code) as set forth in 815 KAR 10:060.
HOT TUB. See definition of *private swimming pool*.

INDUSTRIALIZED BUILDING SYSTEM OR BUILDING SYSTEM. *Buildings* of any size or use, all or any component parts of which are of closed construction made from precast concrete panels or precut wood sections fabricated to individual specifications in an off-site manufacturing facility and assembled in accordance with manufacturer's instructions.

IN-GROUND POOL. See definition of *private swimming pool*.

INMATE LIVING AREA. Those areas where inmates are normally confined and where their movement is restricted by *penal doors*, including cells, dayrooms, dormitories, detoxification cells, isolation cells, and temporary holding cells.

JAIL. County jails and correctional or detention facilities, including correctional facilities defined in KRS 67B.020 which are operated under 501 KAR 3:010 by and under the supervision of any county, regional jail authority, city, or urban county government.

KAR. Kentucky Administrative Regulation.

KENTUCKY RESIDENTIAL CODE. The Kentucky Residential code as adopted by 815 KAR 7:125.

KENTUCKY STANDARDS OF SAFETY. The *Kentucky Administrative Regulations* established by the *Commissioner* pursuant to KRS 227.300 to serve as the fire prevention code for existing *buildings* as well as a supplement to this code, where applicable.

KRS. Kentucky Revised Statutes.

LIFE SAFETY JAIL. County *jails* and correctional or detention facilities, including correctional facilities defined in KRS 67B.020, which are operated under 501 KAR 13:010 by and under the supervision of any county government, which does not house state prisoners as defined by KRS 532.100.

LOCAL JAIL. Any Use Group I-3 facility under the supervision of a county, regional *jail* authority, city, or urban county government.

MANUFACTURED HOME. A single-family residential *dwelling* constructed in accordance with the federal act, manufactured after June 15, 1976, and designed to be used as a single-family residential *dwelling* with or without a permanent foundation when connected to the required utilities,

and includes the plumbing, heating, air conditioning, and electrical systems contained therein. The manufactured home may also be used as a place of business, profession, or trade by the owner, the lessee, or the assigns of the owner or lessee and may comprise an integral unit or condominium structure. *Buildings* the construction of which is not preempted by the federal act are subject to building code requirements of KRS Chapter 198B.

MEMBRANE STRUCTURE. An *air-inflated, air-supported, cable or frame-covered structure*.

MODULAR HOME. An *industrialized building system* which is designed to be used as a residence which is not a *manufactured home* or mobile home.

ORDINARY REPAIR. Any nonstructural reconstruction or renewal of any part of an existing *building* for the purpose of its maintenance or decoration, and shall include, but not be limited to, the replacement or installation of nonstructural components of the *building* such as roofing, siding, windows, storm windows, insulation, drywall or lath and plaster, or any other replacement, in kind, that does not alter the structural integrity or alter the occupancy or use of the *building*, or affect, by rearrangement, *exits* and *means of egress*; but shall not include *additions* to, or *alterations* of, or relocation of any standpipe, water supply, sewer, drainage, gas, soil, waste, vent or similar piping, electric wiring or mechanical equipment including furnaces and hot water heaters or other work affecting public health and safety.

PENAL DOOR. A door required by the Kentucky Jail Standards to enclose *inmate living area* or restrict inmate movement through other areas of a *local jail*.

PERMANENT. As applied to *buildings* or *structures*: a *building* or *structure* affixed to a foundation on a *site* and having fixed utility connections, that is intended to remain on the *site* for more than 180 consecutive calendar days as per Section 3.3.51 of NFPA 1124 listed in Chapter 35. Permanent *buildings* or *structures* intended to be utilized primarily for the retail sales of consumer fireworks shall be registered through the Division of Fire Prevention for primary permanent sales.

POWER SAFETY COVER. A pool cover, which is placed over the water area, and is opened and closed with a motorized mechanism, activated by a control switch.

PRIVATE EVENT. Any event that involves the use of *temporary structures* which are not open to the public, regardless whether on public or private property, and do not charge an admission fee if occupied by less than 100 occupants.

PRIVATE SWIMMING POOL. Any *structure* that contains water over 24 inches (610 mm) deep and which:

- a. is used, or intended to be used, for swimming or recreational bathing in connection with a Group R-3 occupancy; and

- b. is available only to the family and guests of the householder. This includes *swimming pools* constructed below grade on *site*, but not those assembled above grade on *site*.

PRIVATE SWIMMING POOL, INDOOR. Any *private swimming pool* that is totally contained within a private structure and surrounded on all four sides by walls of said structure.

PRIVATE SWIMMING POOL, OUTDOOR. Any *private swimming pool* that is not an indoor pool.

PRODUCTION GREENHOUSE. A detached *agricultural building*, not farm exempt as defined in KRS 198B.010(4), utilized for growing plants on a production or research basis, without public access. Incidental uses such as tending or moving products are considered production activities and do not deem the *building* a *commercial greenhouse*.

PUBLIC EVENT. Any event that involves the use of *temporary structures* which are open to the public, regardless of whether admission is charged or whether on private or public property.

PUBLIC SWIMMING POOL. Any *swimming pool* constructed below grade on *site*, which is not a *private swimming pool*.

PUBLIC WORK. Construction of a new *building*, renovation or *alterations* to an existing *building*, or the change of use of an existing *building* that is owned by the state or any of its political subdivisions including local governments. Public works shall be in accordance with the requirements of KRS 322.360 and KRS 323.033(5).

QUALIFIED CERTIFICATION AUTHORITY. A nationally recognized organization, with the capability to observe, assess, document, and monitor the professional, technical, and production activities of the fabricator or *special inspector*.

RATIONAL ANALYSIS. Alternative analytical calculations, experimental data, or reference citations that have been approved for use by the *building official*.

[A] REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed as an architect as required by KRS 323 or a Professional Engineer as required by KRS 322.

[A] REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A *registered* or licensed *design professional* engaged by the *owner* or the owner's authorized agent to review and coordinate certain aspects of the project, as determined by the *building official*, for compatibility with the design of the *building* or *structure*, including submittal documents prepared by others, deferred submittal documents, and phased submittal documents.

RESIDENTIAL CARE FACILITIES. A *building* or part thereof housing persons on a 24-hour basis, who because of age, mental disability, or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This classification shall include, but not be limited to, the following: residential board and care facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse centers and convalescent facilities.

RESTRICTED CUSTODY CENTER. Restricted custody center means a *facility* or area separate from the *jail* used for the housing of sentenced inmates who have been approved for educational, work, or program participation release, and pretrial inmates who have been approved by the court for educational, work, or program participation release and operated under 501 KAR 7:010.

SEISMIC FORCE RESISTING SYSTEM. The structural elements and structural systems designed to resist earthquake-induced force and deformation effects.

SINGLE-FAMILY DWELLING. A single unit providing complete independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking, and sanitation, and which shall not be connected to any other unit or *building*.

SPA. See definition of *private swimming pool*.

SPECIAL INSPECTOR. A qualified person, firm, or corporation who can demonstrate competence, experience, and education to the satisfaction of the *building official* and *registered design professional in responsible charge*, for inspection of the particular type of construction or operation requiring special inspection(s).

SPECTATOR SEATING. A single section or sections of permanent, temporary, or portable tiered or stepped seating facilities, such as bleachers, grand stands, or folding and telescoping seating, having an aggregate capacity of more than fifty (50) persons.

STATE JAIL. Any Use Group I-3 facility under the direct supervision and operation of the Commonwealth of Kentucky.

STATE MODEL APPROVAL. A *tent*, *canopy*, or membrane *structure* that has been documented, submitted, reviewed, and approved by the *Department* in accordance with the State Model Approval program.

STORE. A *building* classified as a mercantile occupancy that contains a variety of merchandise and that is not used primarily for the retail sales of consumer fireworks as per Section 3.3.74 of NFPA 1124 listed in Chapter 35.

STRUCTURAL OBSERVATION. The visual observation of the structural system by a *registered design professional* for general conformance to the *approved construction documents*. *Structural observation* does not include or waive the responsibility for the inspection required by Section 110, 1705 or other sections of this code.

SUBTERRANEAN SPACE. A cavern resulting from the extraction of subsurface-located material from underground areas in a manner that the surface area of the property is not disturbed except in the vicinity of the entrances and ventilation openings.

SWIMMING POOL. Any *structure* intended for swimming, recreational bathing, or wading that contains water over 24 inches (610 mm) deep. This includes in-ground pools, hot tubs, spas, and fixed-in-place wading pools. *Swimming pools* shall be classified as either *private* or *public swimming pools*.

TEMPORARY. As applied to *buildings* or *structures*: a *building* or *structure* not meeting the definition for *permanent structure*. As applied to electrical power and wiring: electrical service in use or in place for a period of 90 consecutive calendar days or less as per Section 3.3.75 of NFPA 1124 listed in Chapter 35. *Temporary buildings* or *structures* intended to be utilized seasonally for the retail sales of consumer fireworks shall be registered through the Division of Fire Prevention for seasonal sales.

TEMPORARY OVERHEAD SUPPORT STRUCTURE. Any *temporary structure* not otherwise defined by this section, used to either cover a *temporary stage* or *temporary platform*, or used to support any type of entertainment technology equipment over a *temporary stage* or *temporary platform*.

TEMPORARY PLATFORM. A *platform* erected for a 30 days or less within a single permit cycle that has a raised area used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; or similar purpose. These *platforms* shall not have overhead hanging curtains, drops, scenery or stage effects other than lighting and sound.

TEMPORARY STAGE. A *stage* erected for a period of 30 days or less within a calendar year utilized for entertainment or presentations. *Temporary stages* may include overhead hanging curtains, drops, scenery, or stage effects other than lighting and sound.

TEMPORARY STRUCTURE. Any *structure* erected for human occupancy on a *temporary* basis for less than 180 days within a 12-month period on a single premises. *Temporary structures* include, but are not limited to, membrane structures, certified tents, certified canopies, *stages*, *platforms*, and non-certified tents or non-certified canopies are, by definition, *temporary structures* if erected for a 30 days or less within a single permit cycle.

UNDEVELOPED SPACE. *Subterranean space* that has been mined but has not been altered for the use of advanced

industrial capability, technological sophistication, or economic productivity.

CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION

SECTION 303

ASSEMBLY GROUP A

303.3 Assembly Group A-2. Group A-2 occupancy includes assembly uses intended for food or drink consumption including, but not limited to:

- Banquet halls
- Casinos (gaming areas)
- Dance halls
- Night clubs
- Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens)
- Taverns and bars

SECTION 304

BUSINESS GROUP B

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a *building* or *structure*, or a portion thereof, for office, professional, or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

- Airport traffic control towers
- Ambulatory care facilities
- Animal hospitals, kennels and pounds
- Banks
- Barber and beauty shops
- Car wash
- Civic administration
- Clinic, outpatient
- Dry cleaning and laundries: pick-up and delivery stations and self-service
- Educational occupancies for students above 12th grade
- Electronic data processing
- Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 square feet (232m²) in area
- Laboratories: testing and research
- Motor vehicle showrooms
- Post offices
- Print shops
- Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
- Radio and television stations
- Telephone exchanges
- Training and skilled development not in a school or academic program (this shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics, and similar uses regardless of the ages served, and where not classified as a Group A occupancy).

SECTION 305

EDUCATION GROUP E

305.1 Educational Group E. Educational Group E occupancy includes, among others, the use of a *building* or *structure*, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade.

Exception: A room or space occupied for educational purposes by less than 50 persons, 5 years of age or more, and which is accessory to another group shall be classified as part of the main group.

305.2 Group E, day care facilities. Any licensed facility, which is not classified as Group I-1 or I-2 and provides care for 13 or more children or other persons for less than 24 hours per day, shall be classified as Group E. All day cares shall comply with section 427.1.

SECTION 306

FACTORY GROUP F

306.3 Low-hazard factory industrial, Group F-2. Factory Industrial uses that involve the fabrication or manufacturing of noncombustible materials that during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the following:

- Beverages up to and including 16-percent alcohol content
- Brick and masonry
- Ceramic products
- Packing and shipping areas of *controlled environment agriculture facilities*
- Foundries
- Glass products
- Gypsum
- Ice
- Metal products (fabrication and assembly)

**SECTION 307
HIGH-HAZARD GROUP H**

[F]Table 307.1(1) Maximum Allowable Quantity per Control Area of Hazardous Materials Posing a Physical Hazard

Table 307.1(1) of the 2015 IBC will remain as is with the exception of footnote “p”, which will read as follows:

p. The following shall not be included in determining the maximum allowable quantities:

- 1. Liquid or gaseous fuel in fuel tanks on vehicles.*
- 2. Liquid or gaseous fuel in fuel tanks on motorized equipment operated in accordance with this code.*
- 3. Gaseous fuels in piping systems and fixed appliances regulated by the NFPA 54, National Fuel Gas Code.*
- 4. Liquid fuels in piping systems and fixed appliances regulated by the International Mechanical Code.*

307.1.3 Referenced codes. The *fire code official* shall have exclusive *jurisdiction* for code enforcement of the storage, handling, processing, and transportation of *flammable* and *combustible liquids* and other hazardous materials pursuant to 815 KAR 10:060 (Kentucky Standards of Safety); and fees for the installation and alteration of tanks and piping systems shall be paid in accordance with Section 307.1.4.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings that fall under the scope of the *Kentucky Residential Code*.
2. *Flammable* and *combustible liquids* and other hazardous materials used in the operation of a *farm* as defined by this code.

307.1.4 Flammable, combustible liquids or gases, and hazardous materials plan review fee: \$100 per tank, plus \$50 for each additional tank and \$100 per piping system including valves, fill pipes, vents, leak detection, spill and overflow detection, cathodic protection, or associated components.

**SECTION 308
INSTITUTIONAL GROUP I**

308.3 Institutional Group I-1. Institutional Group I-1 occupancy shall include *building, structure*, or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis, in a supervised environment and receive custodial care. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and care facilities
Social rehabilitation facilities

308.4 Institutional Group I-2. Institutional Group I-2 occupancy shall include *buildings and structures* used for *medical care* on a 24-hour basis for more than five persons who are *incapable of self-preservation*. This group shall include, but not be limited to, the following:

Ambulatory Surgical Centers as regulated by 902 KAR 20:101

Foster care facilities

Detoxification facilities

Hospitals

Nursing homes

Psychiatric hospitals

308.4.1 Occupancy conditions. Buildings of Group I-2 shall be classified as one of the occupancy conditions specified in Section 308.4.1.1 or 308.4.1.2.

308.4.1.1 Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification, including but not limited to *nursing homes* and *foster care facilities*.

308.4.1.2 Condition 2. This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification, including but not limited to *hospitals*.

308.4.2 Five or fewer persons receiving medical care. A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the *Kentucky Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *Kentucky Residential Code*.

308.6 through 308.6.4. Sections 308.6 through 308.6.4 of the 2015 IBC shall be DELETED in their entirety.

**SECTION 310
RESIDENTIAL GROUP R**

310.2 Definitions. The following terms are defined in Chapter 2:

BED AND BREAKFAST ESTABLISHMENT

BED AND BREAKFAST HOME

BED AND BREAKFAST INN

BOARDING HOUSE.

CONGREGATE LIVING FACILITIES.

DORMITORY.

GROUP HOME.

PERSONAL CARE SERVICE.

RESIDENTIAL CARE FACILITIES

TRANSIENT.

310.4 Residential Group R-2. Residential Group R-2 occupancies containing *sleeping units* or more than two

dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses having a shared means of egress
Assisted living facilities with more than 16 occupants
Boarding houses (nontransient) with more than 16 occupants
Congregant living facilities (nontransient) with more than 16 Occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Vacation timeshare properties

310.5 Residential Group R-3. Residential Group R-3 occupancies where the occupants are primarily *permanent* in nature and not classified as Group R-1, R-2, R-4, or I, including:

Apartment houses where each *dwelling unit* has an independent *means of egress*

Buildings that do not contain more than two *dwelling units* and exceed three stories in height

Boarding houses (nontransient) with 16 or fewer occupants

Boarding houses (transient) with 10 or fewer occupants

Care facilities that provide accommodations for five or fewer *persons* receiving care

Congregate living facilities (transient) with 10 or fewer occupants

Congregate living facilities (nontransient) with 16 or fewer occupants

Lodging houses with five or fewer *guest rooms*

310.5.1 Care facilities within a dwelling. Care facilities for five or fewer *persons* receiving care that are within a *single-family dwelling* are permitted to comply with the *Kentucky Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3.

310.5.2 Lodging houses. Owner-occupied *lodging houses* with five or fewer *guest rooms* shall be permitted to be constructed in accordance with the *Kentucky Residential Code*.

310.6 Residential Group R-4. Residential Group R-4 occupancies shall include *buildings, structures,* or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24 hour basis in a supervised residential environment and receive custodial care. The persons receiving care shall include but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Group Homes

Halfway houses
Residential board and care facilities
Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except for the height and area limitations provided in Section 503 and the sprinkler provisions as required by Section 903.2.8.

CHAPTER 4
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 405
UNDERGROUND BUILDINGS

405.1 General. The provisions of Sections 405.2 through 405.9 apply to *building* spaces having a floor level used for human occupancy more than 30 feet (9144) below the finished floor of the *lowest level of exit discharge*.

Exceptions: The provisions of Section 405 are not applicable to the following *buildings* or portions of *buildings*:

1. One-and two-family *dwelling*s, sprinklered in accordance with Section 903.3.1.3.
2. Parking garages provided with *automatic sprinkler systems* in compliance with Section 405.3.
3. Fixed guideway transit systems.
4. *Grandstands, bleachers, stadiums, arenas, and similar facilities*.
5. Where the lowest *story* is the only *story* that would qualify the building as an underground building and has an area not greater than 1,500 square feet (139 m²) and has an *occupant load* less than 10.
6. Pumping stations and other similar mechanical spaces intended only for limited periodic use by service or maintenance personnel.
7. Developed *subterranean spaces* in compliance with Section 429 of this code and NFPA 520.

SECTION 407
GROUPS I-1 AND I-2

407.1 General. All occupancies in Groups I-1 and I-2 shall comply with the provisions of NFPA 101. In addition, the following sections of this code shall apply: Section 503.1.3 and Table 506.2 (Area Limitations Only), Sections 101.4.7, 107.2.2, 410, 412.8, 506, Chapter 6, 705, 706, 711, 713.11, 713.12, 714, 715, 716, 718, 719, 805, 806, 1011.12, 1020.5, 1027.5, Chapter 11, 1209.2, Chapter 13, Chapter 14, 2406.4, and Chapters 16 through 33.

407.2 through 407.10. Sections 407.2 through 407.10 of the 2015 IBC shall be DELETED in their entirety.

SECTION 408
GROUP I-3

408.1 General. Occupancies in Group I-3 shall comply with the provisions of this section and other applicable provisions of this code (see Section 308.5).

408.1.1 Definitions. The following terms are defined in Chapter 2:

CELL.

CELL TIER.
HOUSING UNIT.
INMATE LIVING AREA.
JAIL.
LIFE SAFETY JAIL.
LOCAL JAIL.
PENAL DOOR.
RESTRICTED CUSTODY CENTER.
SALLYPORT.
STATE JAIL.

STATE JAILS. *State jails* shall comply with Sections 408.2 through 408.11 of this code.

LOCAL JAILS. *Local jails* shall comply with the special requirements of Section 408.12 in addition to the requirements of Sections 408.2 through 408.11 of this code.

408.12 Local jails. *Local jails* shall comply with the requirements of this section and where conflicts exist with other requirements of this code, this section shall take precedent. *Local jails* shall be further classified as one of the following:

408.12.1 Emergency smoke control/ evacuation. All areas of *jails* and *life safety jails* where an inmate may be confined shall be provided with an emergency smoke control/evacuation system meeting the requirements of this section. The system shall be activated by *smoke detectors* and shall be connected to an emergency power supply. The system shall be engineered as an independent system or may be engineered to work in conjunction with the *building* HVAC system.

408.12.1.1 Design. All floors that house inmates shall be designed to have a minimum of two *smoke compartments* of approximately equal size and separated by a *smoke barrier* wall constructed in accordance with Section 709 of this code. The smoke control system shall be capable of maintaining a negative pressure in the contaminated *smoke compartment*. The smoke control system shall be capable of ten (10) air changes per hour. The plan review of the system, the operation of the system, and the final operational test shall be subject to approval by the Department of Corrections.

408.12.2 Automatic sprinkler system. All areas of *jails* and *life safety jails* where inmates will not be confined, including but not limited to corridors, storage areas, laundry rooms, mechanical rooms, closets, and office areas, shall be equipped with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1. Facilities that are equipped with an *automatic sprinkler system* as required by this section and an emergency smoke control/ evacuation system as required by Section 408.12.1 are entitled to all height or area increases; and other reductions of code requirements normally allowed for fully sprinklered buildings.

408.12.3 Mixed use buildings. Where a *jail* or *life safety jail* is attached to, located above or below another occupancy, or is otherwise a part of a *building* not of the I-3 occupancy, the *building* shall comply with Section 508.4 or Section 706.1 of this code. The *jail* or *life safety jail* shall be separated from all other occupancies with fire-resistant construction of not less than 2-hours.

408.12.4 Doors and glazing. The Department of Corrections shall approve *penal doors* in *jails* and *life safety jails*. Glass-clad polycarbonate glazing shall be an acceptable alternate to wired glazing. All door openings that do not require a *penal door* and hardware shall be protected by opening protectives as required by other sections of this code.

408.12.5 Restricted Custody Centers. All *restricted custody centers* attached to or separate from a *jail* shall be considered as **Occupancy Condition 1** and shall have free egress or automatic time delayed emergency release doors with a maximum time delay of thirty (30) seconds.

408.12.5.1 Automatic sprinkler system. All *restricted custody centers* attached to or separated from a *jail* shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

408.12.6 Existing facilities. All existing *jails*, *life safety jails*, and *restricted custody centers*, which are in operation and have prior approval from the Department of Corrections shall be exempt from these requirements until such time the facilities are renovated.

SECTION 415 GROUPS H-1, H-2, H-3, H-4, AND H-5

415.9.1.3 Tanks. Storage tanks shall be approved tanks conforming to the requirements of the NFPA 30 and 815 KAR 10:060 Kentucky Standards of Safety.

415.9.2 Liquefied petroleum gas facilities. The construction and installation of liquefied petroleum gas facilities shall be in accordance with the requirements of this code. The storage and handling of liquefied petroleum gas systems shall conform to the Kentucky Standards of Safety and NFPA 58 listed in Chapter 35. The design and installation of piping, equipment, and systems that utilize liquefied petroleum gas shall be in accordance with the applicable provisions of NFPA 54 listed in Chapter 35. Liquefied petroleum gas distribution facilities shall be ventilated in accordance with the International Mechanical Code.

Section 415.9.3 Dry cleaning plants. The construction and installation of dry cleaning plants shall be in accordance with the requirements of this code, the *International Mechanical Code*, the Kentucky State Plumbing Code, and NFPA 32. Dry cleaning solvents and systems shall be classified in accordance with the *International Fire Code*.

SECTION 423 STORM SHELTERS

423.1 General. In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC 500.

423.1.1 Scope. This section applies to the construction of storm shelters constructed as separate detached *buildings* or constructed as safe rooms within *buildings* for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. Such *structures* shall be designated to be hurricane shelters, tornado shelters, or combined hurricane and tornado shelters.

423.2 Definitions. The following terms are defined in Chapter 2:

**STORM SHELTER.
COMMUNITY STORM SHELTER.
RESIDENTIAL STORM SHELTER.**

423.3 Critical emergency operations. All newly constructed 911 call stations, emergency operation centers, and fire, rescue, ambulance, and police stations shall have a storm shelter constructed in accordance with ICC 500.

Exception: *Buildings* meeting the requirements for shelter design in ICC 500.

423.4 Group E occupancies. All newly constructed Group E occupancies with an aggregate occupant load of 50 or more shall have a storm shelter constructed in accordance with ICC 500. The shelter shall be capable of housing the total occupant load of the Group E occupancy.

Exceptions:

1. Group E day care facilities.
2. Group E occupancies accessory to places of religious worship.
3. Buildings meeting the requirements for shelter design in ICC 500.

SECTION 426 COMBUSTIBLE DUSTS, GRAIN PROCESSING AND STORAGE

426.1 Combustible dusts, grain processing and storage. The provisions of Sections 426.1.1 through 426.1.7 shall apply to *buildings* in which materials that produce combustible dusts are stored or handled. *Buildings* that store or handle combustible dusts shall comply with the applicable provisions of NFPA 61, NFPA 85, NFPA 120, NFPA 484, NFPA 654, NFPA 655, and NFPA 664, 815 KAR 10:060 Kentucky Standards of Safety, and the *International Fire Code*.

SECTION 427 DAY CARE CENTERS

427.1 Scope. The provisions of this section shall apply to *buildings* or *structures* or portions thereof, required to be licensed as a *Type I* or *Type II day care center*, which are classified in Chapter 3 under Use Group E. Day care centers

shall meet all applicable provisions of this code, except as specifically modified by Sections 427.1 through 427.11 for *Type I day care centers* or Sections 427.12 through 427.16 for *Type II day care centers*. *Type II day care centers* shall also comply with Sections 427.3.1, 427.4, 427.5, 427.5.1, 427.5.4, 427.6, 427.6.3, 427.7, 427.7.1, 427.9.

Exception: After school programs that are also licensed day care centers and are located in schools, shall not be made to

comply with the requirements of this section where all clients of the day care and after school program are also students of that school system.

427.2 Location and construction. *Type I day care centers* shall be limited to the location/construction types specified in Table 427.2 and Section 503.1.4.

**TABLE 427.2
LOCATION/CONSTRUCTION TYPE LIMITATIONS TYPE I DAY CARE CENTERS**

Location of day care	Sprinklered building	Construction type permitted
1 story below LED	Yes	Any type other than 3B & 5B
Story of exit discharge	No	Any type
1 story above LED	Yes	Any type
	No	1A, 1B
2 or 3 stories above LED	Yes	Any type other than 3B, 4, & 5B
>3 stories above LED	Yes	1A, 1B, 2A
but not high rise		
High Rise	Yes	1A, 1B

427.2.1 Smoke barriers. Where day care centers with clients 24 months or less in age or incapable of self-preservation are located one or more stories above the level of exit discharge or where day care centers are located two or more stories above the level of exit discharge, *smoke barriers* shall be provided to divide such stories into a minimum of two *smoke compartments*. The *smoke barriers* shall be constructed in accordance with section 709 but shall not be required to have a fire-resistance rating.

427.3 Mixed use. Where centers are located in a *building* containing another occupancy not associated with the day care, the occupancy shall be completely separated from the day care center by *fire barriers* having a fire-resistance-rating not less than 1-hour.

Exceptions:

1. In assembly occupancies used primarily for worship.
2. Centers in apartment buildings.
 - 2.1 If the two exit accesses from the center enter the same corridor as the apartment occupancy, the *exit accesses* shall be separated in the *corridor* by a *smoke barrier* having not less than a 1-hour fire-resistance rating constructed in accordance with Section 709. The *smoke barrier* shall be so located that there is an *exit* on each side of it.
 - 2.2 The door in the *smoke barrier* shall be not less than 36 inches (914 mm) wide.

427.3.1 Accessory uses. Any heating equipment in spaces occupied by children shall be provided with partitions, screens, or other means to protect children under 6 years of age from hot surfaces and open flames.

427.4 Client load. The client load established for any floor or floors shall be computed at a rate of one person for each 35 square feet (3.25 m²) of *net floor area* occupied by the persons being cared for who shall otherwise be referred to in this code as clients.

427.5 Egress: Each floor occupied by clients shall have not less than two remote *exits*. A *mezzanine* shall be considered a floor for the purpose of this Section.

427.5.1 Length of travel (travel distance). Travel distances shall be as follows:

1. The travel distance between any room door intended as *exit access* and an *exit* shall not exceed 100 feet (30480 mm).
2. The travel distance between any point in a room and an *exit* shall not exceed 150 feet (45720 mm).
3. The travel distance between any point in a sleeping room and an *exit access* door of that room shall not exceed 50 feet (15240 mm).

Exception: The travel distance in Item Nos. 1 and 2 of this section may be increased by 50 feet (15240 mm) in buildings protected throughout by an *approved*, supervised *automatic sprinkler system*.

427.5.2 Corridor width. The minimum width of *exit access corridors* shall be 44 inches (1118 mm).

Exceptions:

1. Thirty-six inches (914 mm) where serving an occupant load of 50 or less.

2. The width required for capacity as determined by Section 1005.

427.5.3 Interior corridors. All *corridors* shall be 1-hour fire-resistance rated. The *corridor* walls shall comply with Section 708.

Exceptions:

1. This *corridor* protection shall not be required when all classrooms served by the *corridors* have at least one door directly to the outside or to an exterior balcony constructed in accordance with Section 1021.
2. As allowed by Section 1020.1.
3. Toilet rooms need not be separated from the corridors, provided they are separated from all other spaces by *fire partitions* having not less than a 1-hour fire-resistance rating in accordance with Section 708.

427.5.4 Special features.

1. Every closet door latch shall be such that children can open the door from inside the closet.
2. Every bathroom door lock shall be designed to permit opening of the locked door from the outside in an emergency.

427.6 Protection from hazards. Cooking appliances and food preparation areas shall be protected in accordance with Sections 427.6.1 through 427.6.3.

427.6.1 Commercial cooking appliance. When a day care center has commercial cooking appliances such as ranges, deep fryers, or a griddle, both of the following shall apply:

1. The kitchen or room in which the appliance(s) is located shall be enclosed by non-fire-resistance rated walls and ceiling designed to resist the passage of smoke. Pass-through openings and door openings shall be equipped with an assembly, which will screen possible flash fires from view.
2. All cooking appliances shall be protected by a commercial exhaust system designed and installed in accordance with the mechanical code listed in Chapter 35.

427.6.2 Domestic cooking appliance. When a day care center has a domestic range with food preparation which does not produce grease-laden vapors, one of the following shall apply:

1. The kitchen or room in which the appliance is located shall be enclosed by a one -hour *fire partition* constructed in accordance with Section 708. A range hood exhaust and suppression system is not required in this situation; or
2. The kitchen or room in which the appliance is located shall comply with Section 427.6.1, Item Nos. 1 and 2.

427.6.3 Non-grease-producing cooking appliances. Day care centers using non-grease-generating cooking appliances

such as microwave ovens, wall ovens, and crock pots, shall locate these appliances so as not to be accessible to the clients.

427.7 Interior finish. All walls and ceilings shall have a Class I or Class II finish rating in accordance with ASTM E84 listed in Chapter 35.

427.7.1 Floor finish. All floor coverings within a *corridor* and *exit* shall be Class I or Class II in accordance with NFPA 253 listed in Chapter 35.

427.8 Fire protective signaling system. A manual fire alarm system shall be provided throughout the center.

Exceptions:

1. Day care centers housed in one room.
2. Day care centers with a calculated client occupant load less than 50.

427.9 Automatic fire detection system. Automatic smoke detection systems shall be provided throughout all the day care centers regulated by Section 427.1. The *automatic smoke detectors* shall be provided in the following locations:

1. On the ceiling in front of the doors to *stairways*;
2. At no greater spacing than 30-feet (9144 mm) in the *corridors* of all floors containing the center; and
3. In all rooms within the center that are classified as a *habitable space* or an *occupiable space* in accordance with Section 202 of this code.

Exceptions:

1. Centers housed in one room.
2. Hard-wired, single-station *smoke detectors* may be installed in day care centers with a calculated client occupant load of less than 50, provided the *smoke detectors* can be heard throughout the center.

427.10 Engineers/architects law. Plans for the construction or redesign of centers having a client load calculated pursuant to Section 427.4, which exceeds 100, shall bear the seal and signature of a *registered design professional*.

427.11 Barrier-free design. All new work shall comply with the applicable provisions of Chapter 11.

Exception: Church-operated day care centers.

427.12 Location and construction. *Type II day care centers* shall be limited to the location/construction types specified in the Table 427.12.

**TABLE 427.12
LOCATION/CONSTRUCTION TYPE LIMITATIONS TYPE II DAY CARE CENTERS**

LOCATION OF DAY CARE	SPRINKLERED BLDG.	CONSTRUCTION TYPE PERMITTED
1 Story Below LED	Yes	Any Type
	No	Not Permitted
Story of Exit Discharge	No	Any Type
	Yes	Any Type
1 Story Above LED	No	Any Type Other than VA & VB
	Yes	Any Type
2 Stories Above LED	Yes	Any Type
	No	Not Permitted

427.13 Corridor width. The minimum width of *exit access corridors* shall be 36 inches.

427.14 Domestic cooking appliance. When a day care center has a domestic range with food preparation, which does not produce grease-laden vapors, a cooking disclosure form shall be completed and signed by the owner indicating no cooking that produces grease laden vapors will take place in the home.

427.15 Barrier-free design. All new work shall comply with the applicable provisions of Chapter 11.

Exception: Church-operated day care centers.

427.16 Fire extinguishers. Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless the *building official* determines that the hazard posed indicates the need for placement away from normal paths of travel.

**SECTION 428
BED AND BREAKFAST ESTABLISHMENTS**

428.1 Bed-and-breakfast homes. Bed-and-breakfast homes shall comply with the requirements of this code applicable to Use Group R-3 and the following conditions:

1. All hallways and *means of egress* serving guestrooms shall be permanently illuminated and emergency lighting shall be provided.
2. The maximum overnight guest occupant load shall be 10 persons and it shall be posted.
3. Interconnected smoke alarms shall be provided in accordance with Sections 907.2.11.2, 907.2.11.5, and 907.2.11.6.
4. Each door between guest sleeping rooms and the main egress hallway or *corridor* shall be equipped with an *approved* self-closing device.
5. There shall be two remote *exits* to the outside from the ground floor.

428.2 Bed-and-breakfast inns. Bed-and-breakfast inns shall comply with the requirements of this code applicable to Use Group R-1.

**SECTION 429
SUBTERRANEAN SPACES**

429.1 General. The provisions of this section shall apply to developed subterranean spaces of any occupancy except Group H for the use of advanced industrial capability, technological sophistication, or economic productivity.

Exception:

1. Tourist caverns.
2. Wine storage caverns.
3. Gas and oil storage reservoirs.
4. Hazardous waste repositories.
5. Utility installations such as pumping stations.
6. Working mines.
7. Transportation and pedestrian tunnels.
8. Aboveground buildings with belowground stories.
9. Cut and cover underground buildings specifically addressed in Section 405.

429.2 Referenced standards. Developed *subterranean spaces* shall comply with the requirements of this section and NFPA 520 as referenced in Chapter 35. Where NFPA 520 references other NFPA standards, those standards shall not be applicable unless specifically referenced in this code.

**SECTION 430
BARRELED SPIRIT STORAGE BUILDINGS**

430.1 Scope. The provisions of this section shall apply to *buildings* and *structures* utilized solely for the purpose of storing barreled spirits after manufacture during the aging process. Except as specifically modified by Sections 430.2 through 430.14, barreled spirit storage buildings shall meet all applicable provisions of this code.

430.2 Type of construction. Barreled spirit storage *buildings* shall be constructed of the following materials:

1. Non-sprinklered and sprinklered rack supported structures shall be constructed of any *approved* materials.
2. Pallet storage *buildings* shall be constructed of Type IIB construction. Pallet storage buildings shall be sprinklered in accordance with Section 903.1 of this code.

430.2.1 Design professional. The structural design shall bear the seal and signature of an engineer licensed in Kentucky.

430.2.2 Earthquake loads. Rack supported barreled spirit storage buildings shall be exempt from seismic design and Section 1613.1 of this code.

430.2.3 Emergency alarms. An audible alarm will be provided at the sprinkler valve house, which will be automatically activated in the event of water flow.

430.3 Building area. Barreled spirit storage buildings shall not exceed the following areas:

1. Non-sprinklered rack supported structures shall not exceed 20,000 square feet.
2. Rack supported structures protected throughout by an *automatic sprinkler system* shall not exceed 40,000 square feet.
3. Non-sprinklered pallet storage buildings shall not exceed 20,000 square feet.
4. Pallet storage buildings protected throughout by an *automatic sprinkler system* shall not exceed 55,000 square feet and shall be constructed of Type IIB construction.

430.4 Building height. Barreled spirit storage buildings shall be a one story, not to exceed the following heights:

1. Non-sprinklered rack supported structures shall not exceed 55 feet in height.
2. Sprinklered rack supported structures shall not exceed 60 feet in height.
3. Non-sprinklered and sprinklered pallet storage buildings shall not exceed 27 feet in height.

430.5 Building location on property. The following *fire separation distances* shall be maintained between the barreled spirit storage buildings and any other buildings on the property and to the opposite edge of a street, alley, or other public way or property line.

1. Non-sprinklered pallet storage and non-sprinklered rack supported structures shall have a minimum separation distance of 200 feet.
2. Sprinklered pallet storage and sprinklered rack supported structures shall have a minimum separation distance of 100 feet.

Exception: The *fire separation distance* may be reduced to not less than 100 feet to an adjacent sprinklered barreled spirit storage warehouse when the exposed exterior wall of the non-sprinklered barreled spirit storage warehouse is protected by an exterior water curtain.

430.6 Spill and runoff protection. Earthen dykes or containment trenches shall surround each barreled spirit storage building to contain the total quantity of liquids warehoused plus the design flow volume of fire protection water calculated to discharge from the fire extinguishing system over the minimum required system design area or area of the room or area in which the storage is located, whichever is smaller. The containment capacity shall be designed to contain the flow for a period of 20 minutes.

430.7 Mezzanines. The number of mezzanine levels shall not exceed the following:

1. Non-sprinklered rack supported structures shall not exceed five (5) mezzanine levels.
2. Sprinklered rack supported structures shall not exceed six (6) mezzanine levels.
3. Sprinklered and non-sprinklered pallet storage buildings shall not have mezzanine levels.

430.7.1 Aggregate area of mezzanines. Rack supported barreled spirit storage buildings shall be exempt from Section 505.2.1 of this code.

430.8 Portable fire extinguishers. Pallet storage buildings shall have fire extinguishers installed at each *exit* door and on the forklifts used within the pallet storage building.

430.9 Means of egress. Each rack supported barreled spirit storage buildings shall have *means of egress* as required by this section and Chapter 10 of this code.

430.9.1 Number of exits. The first story and all mezzanine levels shall be provided with a minimum of two *exits*. *Exits* shall be located at each end of the *building* on each level, and shall be enclosed or separated from the *building* interior by *fire barriers* having not less than a one-hour fire resistance rating.

430.9.2 Egress doors and hardware. All egress doors shall swing in the direction of egress travel.

430.9.3 Locks and latches. Section 1010.1.9.3 shall not apply for all barreled spirit storage buildings when documentation from the *owner* is filed with the *permit* application confirming compliance with Federal Alcohol and Tobacco Tax and Trade Bureau requirements for security locking on barreled spirit warehouses and documenting all padlocks required by the TTB are removed from all exterior doors while the building is occupied.

430.9.4 Means of egress illumination. The *means of egress* in rack supported barreled spirit storage *buildings* shall be illuminated by the buildings electrical system if the building is to be constantly energized or natural lighting if an electrical system is not provided. The illumination level shall not be less than one (1) foot-candle at the walking

surface. Pallet storage buildings shall comply with Section 1008 of this code.

430.9.5 Exit signs. Rack supported barreled spirit storage *buildings* shall not be required to have illuminated *exit* signs, only placards and shall be exempt from Section 1013.3 of this code. Directional *exit* signs shall point the way to the *exit* itself. *Exit* doors shall have signs with no arrows that simply read EXIT. Pallet storage building *exit* signs shall comply with Section 1013.

430.10 Travel distance. The *exit* access travel distance shall not exceed the following:

1. Non-sprinklered pallet storage and non-sprinklered rack supported *buildings* shall have an *exit* access travel distance not to exceed 150 feet.
2. Sprinklered pallet storage and sprinklered rack supported *buildings* shall have an *exit* access travel distance not to exceed 200 feet.

430.11 Roof covering. The roof covering of all barreled spirit storage buildings shall not consist of a tar based material and shall have a Class A rating.

430.12 Building ventilation and illumination. Mechanical ventilation and artificial illumination shall not be required, but shall not be prohibited.

430.12.1 Artificial illumination and ventilation. If provided, artificial illumination and ventilation inside the barreled spirit storage *buildings* shall comply with NFPA 70.

430.13 Electrical wiring and equipment. Electrical wiring and equipment within the *building* shall comply with NFPA 70.

SECTION 431 CONSUMER FIREWORKS RETAIL SALES FACILITIES

431.1 General. Consumer fireworks retail sales facilities shall comply with the requirements of this code applicable to Use Group M and NFPA 1124 listed in Chapter 35. The provisions of this section are not applicable to *buildings* or *structures* used for the storage of consumer fireworks.

431.2 Definitions. The following terms are defined in Chapter 2:

**CONSUMER FIREWORKS RETAIL SALES (CFRS)
FACILITY.**
**CONSUMER FIREWORKS RETAIL SALES (CFRS)
STAND.**
PERMANENT.
STORE.
TEMPORARY.

431.3 Facility classification. A consumer fireworks retail sales facility shall be classified as either a *permanent* or *temporary building* or *structure*.

431.3.1 Permanent buildings and structures. *Permanent buildings* and *structures* shall include a *CFRS facility* as

defined in Section 3.3.29.1 or a *store* as defined in Section 3.3.74 of NFPA 1124. Facilities used primarily for the retail sales of consumer fireworks shall be located in detached stand-alone *buildings* or *structures* and shall comply with Sections 7.1.2, 7.2, 7.3, 7.4.1, 7.4.2, 7.4.5, 7.4.6, 7.4.7, 7.4.8, 7.4.9, 7.4.10 and 7.4.11 of NFPA 1124. *Structures* containing a variety of merchandise and that are not primarily used for the retail sales of consumer fireworks shall comply with Section 7.5 of NFPA 1124.

431.3.2 Temporary structures. *Temporary structures* shall include a *CFRS stand, tent, canopy, or membrane structure*. *Temporary structures* shall comply with Sections 7.1, 7.2, 7.3, 7.4.1, 7.4.2, 7.4.5, 7.4.6, 7.4.7, 7.4.8, 7.4.9, 7.4.10, 7.4.11 and 7.6 of NFPA 1124.

SECTION 432 TEMPORARY STRUCTURES

432.1 Definitions. The following terms are defined in Chapter 2

AIR-INFLATED STRUCTURE.
AIR-SUPPORTED STRUCTURE.
CANOPY.
CERTIFIED TENT.
ENGINEERED TENT.
MEMBRANE STRUCTURE.
PRIVATE EVENT.
PUBLIC EVENT.
STATE MODEL APPROVAL.
TEMPORARY STRUCTURE.
TEMPORARY STAGE.
TEMPORARY PLATFORM.
TENT.

432.2 General. All *temporary structures, tents, canopies, and membrane structures* shall comply with this section and all other applicable sections of this code.

432.3 Approval required. *Tents, canopies, and membrane structures* having an area in excess of 400 square feet (37 m²) shall not be erected, operated, or maintained for any purpose without first obtaining a *permit* and approval from the authority having *jurisdiction*.

Exceptions:

1. *Tents* used exclusively for recreational camping purposes.
2. Fabric *canopies* open on all sides which comply with all of the following:
 - 2.1. Individual *canopies* having a maximum size of 700 square feet (65 m²);
 - 2.2. The aggregate area of multiple *canopies* placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m²) total; and

- 2.3. A minimum clearance of 12 feet (3658 mm) to all *structures* and other *tents*.
- 3. *Temporary structures* utilized at a *private event* as defined by Chapter 2 of this code.

432.3.1 Approval methods. *Temporary structures, tents, canopies, and membrane structures* shall be approved using one of the following methods:

432.3.1.1 State model approval. *Permit* review using *state model approval* as part of the required *construction documents*. This method requires prior approval of templated structures that do not vary in size or configuration on a per-event basis, and that will be installed using the same methods from site-to-site as described on the construction documents. Use of the *state model approval* method shall be permitted for engineered and certified *structures*.

432.3.1.2 Event-and site-specific engineering analysis. *Permit* review using event-and site-specific engineering analysis as part of the required *construction documents* when no prior *state model approval* exists. Event-and site-specific review approval shall be permitted for engineered and certified *tents*.

432.3.1.3 Structures without certification, engineering or model approval. *Permit* review using the provided *construction documents* showing information required by Section 105, 107, and 108 of this code, containing lateral force resisting system (LFRS) anchorage reactions per Section 432.5.4, and where no prior certification, engineering, or *state model approval* exists.

432.4 Permits. *Permits* shall be required as set forth in Sections 105, 107 and 108 of this code.

432.4.1 Construction documents. A detailed *site* and floor plan for *tents, canopies, membrane structures, and temporary structures* shall be provided with each application for approval. The *tent, canopy, or membrane structure* floor plan shall indicate details of the *means of egress, seating capacity, arrangement of the seating, and location and type of heating and electrical equipment*. Site plan shall include distances between *tents, temporary structures, buildings, and distances to property lines*.

432.4.1.1 Elevated floor systems. Any elevated floor system that supports *temporary structures, membrane structures, tents, and canopies* shall be designed or certified by a *registered design professional* documenting that such an elevated system can support the dead and live loads.

432.4.1.2 Engineered and non-certified tents use limitations: No *state model approved tent, engineered tent, or certified tent* shall be occupied, and shall be evacuated during use, when the sustained winds meet or exceed 40 MPH. If the maximum wind speed capacity

shown on the *permit* documents is 40 MPH or less, then the *tent* shall be evacuated at wind speeds no greater than 25 MPH, or at 75% of the established wind speed capacity, whichever is lower. *Tents* approved using the *permit* review method described in Section 432.3.1.3 shall not be used or occupied for more than a 30-day period within a single *permit* cycle.

432.5 Site placement. Site placement of state approved *tents* and *temporary structures* shall be submitted for review and approval by the authority having *jurisdiction* in accordance with Section 104.0 and KRS 198B.60 (5).

432.5.1 Fees. Individual *tent* and *temporary structures* for site placement shall be \$125.00. Fees for groups of *tents* shall be accordance with Table 432.5.1

**Table 432.5.1
SITE PLACEMENT FEE FOR GROUPS**

AGGREGATE SQUARE FOOTAGE OF TENT AREA	AMOUNT OF FEE
0 - 2,000	\$250.00
2,001 – 5,000	\$350.00
5,001 – 10,000	\$500.00
10,001 – 15,000	\$750.00
15,001 – 20,000	\$950.00
20,001 – 30,000	\$2,000.00
30,001 – 50,000	\$2,850.00
50,001 – 70,000	\$3,250.00
70,001 – 100,000	\$4,000.00

432.6 State model approval. To obtain *state model approval*, complete *construction documents* for *tents, canopies, and membrane structures* greater than 400 square feet shall be submitted to the *Department* for review and model approval to be erected in the Commonwealth. Future structural changes made to an *approved tent* shall be submitted for re-evaluation and approval prior to any installation in the Commonwealth of Kentucky.

432.6.1 Fees. The fee for *state model approval* is \$250.00. Re-evaluations of structural changes after model approval shall be \$100.00. Fees associated with a series or product line of *tents* shall be \$250.00 per series or product line. All fees shall be made payable to the Kentucky State Treasurer.

432.6.2 Construction documents. A plan application and *construction documents* for *state model approval* shall include but not limited to the following:

1. Plans drawn to minimum scale of 1/8 inch = 1 foot;
2. Manufacturer’s Specifications;

3. Structural drawings showing the calculated lateral wind force resisting system (LFRS) reactions at all anchorage or ballast locations, along with the minimum required anchorage or ballast requirements necessary to resist the calculated reactions;
4. Structural documentation clearly indicating the parameters and assumptions used to determine the LFRS reactions. Structural documentation shall include structural framing and connection to components;
5. Structural drawings containing seals and signatures of a *registered design professional*; and
6. Flame Propagation Criteria for *tent* covering per NFPA 701.

432.6.3 Basic wind speed reductions permitted. Reductions to the basic wind speed requirements of ASCE 7, in accordance with ASCE 37-14 Design Loads on Structures during Construction shall be permitted when determining wind loads on *temporary structures* covered by this section. The *registered design professional* shall note such reductions and associated methodology in the *permit* submittal engineering documents. Wind speeds used for *permit* submittal documentation and engineering analysis shall correlate to the wind speed use limitations of section 432.4.2.2.

432.6.4 Non-certified tent anchorage reactions. Non-certified *tent* anchorage reactions shall be calculated using a minimum design wind pressure of 7.5 pounds per square foot (psf) applied to the project *tent* elevation area as calculated by the formula below and Figure 432.6.4. The total effected wind surface area shall be the sum of vertically projected wall and roof surfaces at two adjacent sides. The anchorage reactions shall be calculated by multiplying the total effected wind surface area square footage by 7.5 (psf), then dividing the result by the total number of anchorage points connected to the two adjacent sides used for the calculation.

$$R_{AP} = \frac{7.5(A_1 + A_2 + A_3 + A_4)}{AP}$$

where:

R_{AP} = Reaction at each anchorage point, expressed in pounds.

A_1 = square footage of tent area on one side of *tent*.

A_2 = projected square footage of *tent* roof area above A_1 .

A_3 = square footage of *tent* area of adjacent side of A_1 .

A_4 = projected square footage of *tent* roof area above A_3 .

AP = number of anchoring points used for guy cable along the two adjacent sides.

432.7 Place of assembly. For the purpose of this chapter, a place of assembly shall include a circus, carnival, *tent* show,

theater, skating rink, dance hall, or other place of assembly in or under which persons gather for any purpose.

432.8 Use period. Temporary *tents*, *temporary structures*, *air-supported*, *air-inflated*, or tensioned *membrane structures*, and *canopies* shall not be erected for a period of more than 180 days within a 12-month period on a single premises.

432.9 Inspections. *Structures* covered by this section shall be inspected for conformance with the requirements of this section prior to issuance of the temporary certificate of occupancy. After occupancy approval has been issued, *structures* covered by this section shall be re-inspected at regular intervals, but not less than once per *permit* use period, by the permittee, *owner*, or agent to determine that the installation is maintained in accordance with this chapter.

Exception: Re-inspection is not required for *permit* use periods of less than 30 days.

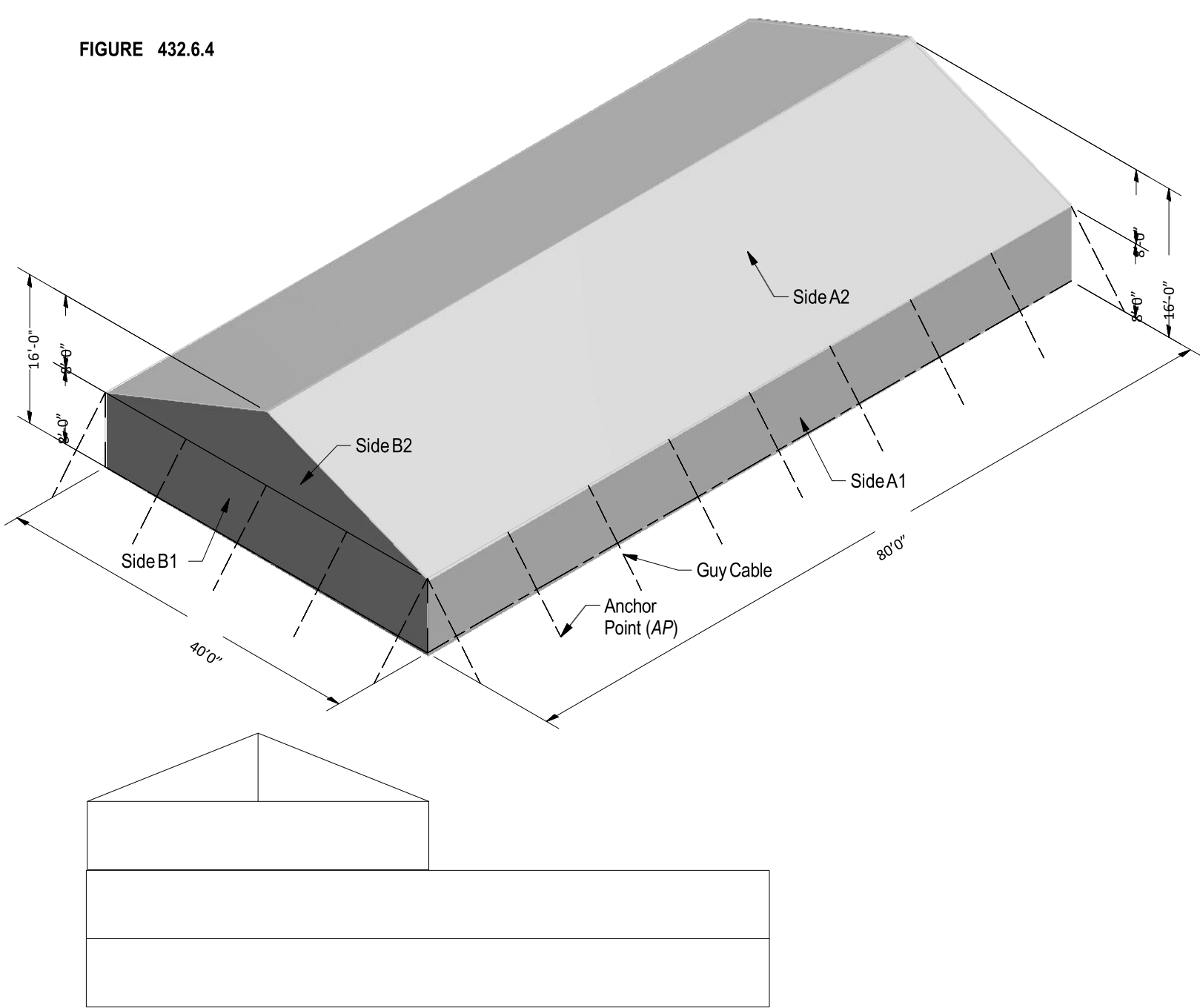
432.10 Access. Fire apparatus access roads shall be provided in accordance with Section 506.3.1 of this code.

432.10.1 Location. *Tents*, *canopies*, or *membrane structures* shall not be located within 20 feet (6096 mm) of *lot lines*, *buildings*, other *tents*, *canopies*, or *membrane structures*, parked vehicles, or internal combustion engines. For the purpose of determining required distances, support ropes, and guy cable shall be considered as part of the temporary *membrane structure*, *tent*, or *canopy*.

Exceptions:

1. Separation distance between *membrane structures*, *tents*, and *canopies* not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m²).
2. *Membrane structures*, *tents*, or *canopies* need not be separated from *buildings* when all of the following conditions are met:
 - a. The aggregate floor area of the *membrane structure*, *tent*, or *canopy* shall not exceed 10,000 square feet (929 m²);
 - b. The aggregate floor area of the *building* and *membrane structure*, *tent*, or *canopy* shall not exceed the allowable floor area including increases as indicated in Section 506 of this code;
 - c. Required *means of egress* provisions are provided for both the *building* and the *membrane structure*, *tent*, or *canopy*, including travel distances; and
 - d. Fire apparatus access roads are provided in accordance with Section 503.2 of the *International Fire Code*.

FIGURE 432.6.4



Projected Side B1+B2

Projected Side A1+A2

To calculate minimum cable tension holding capacity (f) on each anchorage point (AP), use the formula:

$$f = \frac{(A1+A2+B1+B2) \times 7.5}{AP}$$

(Step 1)	Projected Area A1 =	80'x8' =	640 sq ft
	Projected Area A2 =	80'x8' =	640 sq ft
	Projected Area B1 =	40'x8' =	320 sq ft
	Projected Area B2 =	20'x8' =	160 sq ft
	Projected Area Total =		1,760 sq ft

Therefore, each AP around the entire tent shall have the capacity to hold a minimum guy cable tension reaction of 943 lbs at each AP .

(Step 2) Calculate Total Wind Force:
1,760 sq ft x 7.5 psf = 13,200 lbs

943 lbs per AP x 28 AP = 26,400 lbs of cable tension capacity for the entire tent.

(Step 3) Total AP for (2) Adjacent Sides A + B = 14

(Step 4) Calculate Minimum Cable Tension:
Capacity (f) per AP = 13,200 lbs/14 = 943 lbs

Note: When calculating tension force reaction (f), use AP for two adjacent sides only, and apply the result to all guy cable anchor points around the perimeter. More guy cable capacity may be required, depending upon tent style or manufacturers' recommendations.

432.11 Location of structures in excess of 15,000 square feet in area. *Membrane structures* having an area of 15,000 square feet (1394 m²) or more shall be located not less than 50 feet (15 240 mm) from any other *tent* or *structure* as measured from the sidewall of the *tent* or *membrane structure* unless joined together by a *corridor*.

432.11.1 Connecting corridors. *Tents* or *membrane structures* are allowed to be joined together by means of *corridors*. *Exit* doors shall be provided at each end of such *corridor*. On each side of such *corridor* and approximately opposite each other, there shall be provided openings not less than 12 feet in total aggregate (3658 mm) width.

432.11.2 Fire break. *Membrane structures* where the aggregate floor area is greater than 15,000 square feet shall have an unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy cable or other obstructions and shall be maintained on all sides.

432.12 Seating arrangements. Seating in *tents*, *canopies*, or *membrane structures* shall be in accordance with Chapter 10 of this code.

432.13 Means of egress. *Means of egress* for *temporary tents*, *canopies*, and *membrane structures* shall be in accordance with Sections 432.13.1 through 432.13.8.

432.13.1 Distribution. *Exits* shall be spaced at approximately equal intervals around the perimeter of the *tent*, *canopy*, or *membrane structure*, and shall be located such that all points are 100 feet (30 480 mm) or less from an *exit*.

432.13.2 Number. *Tents*, *canopies*, or *membrane structures*, or a usable portion thereof shall have at least one *exit* and not less than the number of *exits* required by Table 432.13.2. The total width of *means of egress* in inches (mm) shall not be less than the total occupant load served by *means of egress* multiplied by 0.2 inches (5 mm) per person.

432.13.3 Exit openings from tents. *Exit* openings from *tents* shall remain open unless covered by a flame-resistant curtain. The curtain shall comply with the following requirements:

1. Curtains shall be free sliding on a metal support. The support shall be a minimum of 80 inches (2032 mm) above the floor level at the *exit*. The curtains shall be so arranged that, when open, no part of the curtain obstructs the *exit*.
2. Curtains shall be of a color, or colors, that contrast with the color of the *tent*.

432.13.4 Doors. *Exit* doors shall swing in the direction of *exit* travel. To avoid hazardous air and pressure loss in *air-supported membrane structures*, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall not exceed 15 pounds (66 N).

TABLE 432.13.2

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (INCHES)
		TENT OR CANOPY
10 to 199	2	72
200 to 499	3	72
500 to 999	4	96
1,000 to 1,999	5	120
2,000 to 2,999	6	120
Over 3,000 ^a	7	120

Minimum Number of Means of Egress and Means of Egress Widths from Temporary Membrane Structures, Tents and Canopies

For SI: 1 inch = 25.4 mm

- a. When the occupant load exceeds 3,000 the total width of *means of egress* (in inches) shall not be less than the total occupant load multiplied by 0.2 inches per person.

432.13.5 Aisle. The width of *aisles* without fixed seating shall be in accordance with the following:

1. In areas serving employees only, the minimum aisle width shall be 24 inches (610 mm) but not less than the width required by the number of employees served.
2. In public areas, smooth-surfaced, unobstructed *aisles* having a minimum width of not less than 44 inches (1118 mm) shall be provided from seating areas, and *aisles* shall be progressively increased in width to provide, at all points, not less than 1 foot (305 mm) of aisle width for each 50 persons served by such aisle at that point.

432.13.5.1 Arrangement and maintenance. The arrangement of *aisles* shall be subject to approval by the authority having *jurisdiction* and shall be maintained clear at all times during occupancy.

432.13.6 Exit signs. *Exits* shall be clearly marked. Exit signs shall be installed at required *exit* doorways and where otherwise necessary to indicate clearly the direction of egress when the *exit* serves an occupant load of 50 or more.

1. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less; or
2. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site

generator set and the system shall be installed in accordance with NFPA 70.

432.13.7 Means of egress illumination. *Means of egress* shall be illuminated with light having an intensity of not less than 1 foot-candle (11 lux) at floor level while the structure is occupied. Fixtures required for *means of egress* illumination shall be supplied from a separate circuit or source of power.

432.13.8 Maintenance of means of egress. The required width of *exits, aisles,* and passageways shall be maintained at all times to a *public way.* Guy wires, guy ropes, guy cables and other support members shall not cross a *means of egress* at a height of less than 8 feet (2438 mm). The surface of *means of egress* shall be maintained in an *approved* manner.

432.14.1 General. All *tents, canopies,* and *membrane structures,* both *temporary* and *permanent,* shall be in accordance with this section. *Permanent tents, canopies,* and *membrane structures* shall also comply with all applicable provisions of this code.

432.14.2 Flame propagation performance treatment. Before a *permit* is granted, the *owner* or agent shall file with the authority having *jurisdiction* a certificate executed by an *approved* testing laboratory certifying that the *tents, canopies,* and *membrane structures* and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of material meeting the flame propagation performance criteria of NFPA 701 or shall be treated with a flame retardant in an *approved* manner and meet the flame propagation performance criteria of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the *permit.*

432.14.3 Label. *Membrane structures, tents,* or *canopies* shall have a permanently affixed label bearing the identification of size and fabric or material type.

432.14.4 Certification. An affidavit or affirmation shall be submitted to the authority having *jurisdiction* and a copy retained on the premises on which the *tent* or *air-supported structure* is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric:

1. Names and address of the *owners* of the *tent, canopy,* or *air-supported structure;*
2. Date the fabric was last treated with flame-retardant solution;
3. Trade name or kind of chemical used in treatment;
4. Name of person or firm treating the material; and
5. Name of testing agency and test standard by which the fabric was tested.

432.14.5 Combustible materials. Hay, straw, shavings, or similar combustible materials shall not be located within any *tent, canopy,* or *membrane structure* containing assembly

occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time. The areas within and adjacent to the *tent* or *air-supported structure* shall be maintained clear of all combustible materials or vegetation that could create a fire hazard within 20 feet (6096 mm) of the structure. Combustible trash shall be removed at least once a day from the structure during the period the structure is occupied by the public.

432.14.6 Smoking. Smoking shall not be permitted in *tents, canopies,* or *membrane structures.* *Approved* "No Smoking" signs shall be conspicuously posted.

432.14.7 Open or exposed flame. Open flame or other devices emitting flame, fire or heat, or any flammable or combustible liquids, gas, charcoal, or other cooking device, or any other unapproved devices shall not be permitted inside or located within 20 feet (6096 mm) of the *tent, canopy,* or *membrane structures* while open to the public unless approved by the authority having *jurisdiction.*

432.14.8 Fireworks. Fireworks shall not be used within 100 feet (30 480 mm) of *tents, canopies,* or *membrane structures.*

432.14.9 Spot lighting. Spot or effect lighting shall only be by electricity, and all combustible construction located within 6 feet (1829 mm) of such equipment shall be protected with *approved* noncombustible insulation not less than 9.25 inches (235 mm) thick.

432.14.10 Clearance. There shall be a minimum clearance of at least 3 feet (914 mm) between the fabric envelope and all contents located inside the *tent* or *membrane structure.*

432.14.11 Portable fire extinguishers. Portable fire extinguishers shall be provided as required by Section 906 of this code.

432.14.12 Fire protection equipment. Fire hose lines, water supplies, and other auxiliary fire equipment shall be maintained at the *site* in such numbers and sizes as required by the authority having *jurisdiction.*

432.14.13 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with Chapter 10 of this code.

432.14.14 Heating and cooking equipment. Heating and cooking equipment shall be in accordance with Sections 432.14.14.1 through 432.14.14.7

432.14.14.1 Installation. Heating or cooking equipment, tanks, piping, hoses, fittings, valves, tubing, and other related components shall be installed as specified in the *International Mechanical Code* and the National Fuel Gas Code (NFPA 54), and shall be approved by the authority having *jurisdiction.*

432.14.14.2 Venting. Gas, liquid, and solid fuel-burning equipment designed to be vented shall be vented to the

outside air as specified in the National Fuel Gas Code (NFPA 54) and the *International Mechanical Code*. Such vents shall be equipped with *approved* spark arresters when required. Where vents or flues are used, all portions of the *tent, canopy, or membrane structure* shall be not less than 12 inches (305 mm) from the flue or vent.

432.14.14.3 Location. Cooking and heating equipment shall not be located within 10 feet (3048 mm) of exits or combustible materials

432.14.14.4 Operations. Operations such as warming of foods, cooking demonstrations, and similar operations that use solid flammables, butane, or other similar devices which do not pose an ignition hazard, shall be approved by the authority having *jurisdiction* provided that all other applicable requirements of this section are met.

432.14.14.5 Cooking tents. *Tents* where cooking is performed shall be separated from other *tents, canopies, or membrane structures* by a minimum of 20 feet (6096 mm).

432.14.14.6 Outdoor cooking. Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) of a *tent, canopy, or membrane structure*.

432.14.14.7 Electrical heating and cooking equipment. Electrical cooking and heating equipment shall comply with the NFPA 70.

432.14.15 LP-gas. The storage, handling, and use of LP-gas and LP-gas equipment shall be in accordance with Sections 432.14.15.1 through 432.14.15.3.

432.14.15.1 General. LP-gas equipment such as tanks, piping, hoses, fittings, valves, tubing, and other related components shall be approved and in accordance with Chapter 38 and with the NFPA 54.

432.14.15.2 Location of containers. LP-gas containers shall be located outside. Safety release valves shall be pointed away from the *tent, canopy, or membrane structure*.

432.14.15.2.1 Containers 500 gallons or less. Portable LP-gas containers with a capacity of 500 gallons (1893 L) or less shall have a minimum separation between the container and *structure* not less than 10 feet (3048 mm).

432.14.15.2.2 Containers more than 500 gallons. Portable LP-gas containers with a capacity of more than 500 gallons (1893 L) shall have a minimum separation between the container and *structures* not less than 25 feet (7620mm).

432.14.15.3 Protection and security. Portable LP-gas containers, piping, valves, and fittings that are located outside and are being used to fuel equipment inside a *tent, canopy, or membrane structure* shall be adequately protected to prevent tampering, damage by vehicles, or other hazards, and shall be located in an *approved* location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

432.14.16 Flammable and combustible liquids. The storage of *flammable* and *combustible liquids* and the use of flammable-liquid-fueled equipment shall be in accordance with Sections 432.14.16.1 through 432.14.16.3.

432.14.16.1 Use. Flammable-liquid-fueled equipment shall not be used in *tents, canopies, or membrane structures*.

432.14.16.2 Flammable and combustible liquid storage. *Flammable* and *combustible liquids* shall be stored outside in an *approved* manner not less than 50 feet (15 240 mm) from *tents, canopies, or membrane structures*. Storage shall be in accordance with this code and Chapter 34 of the *International Fire Code*.

432.14.16.3 Refueling. Refueling shall be performed in an *approved* location not less than 20 feet (6096 mm) from *tents, canopies, or membrane structures*.

432.14.17 Display of motor vehicles. Liquid- and gas-fueled vehicles and equipment used for display within *tents, canopies, or membrane structures* shall be in accordance with Sections 432.14.17.1 through 432.14.17.5.3.

432.14.17.1 Batteries. Batteries shall be disconnected in an appropriate manner.

432.14.17.2 Fuel systems. Vehicles or equipment shall not be fueled or defueled within the *tent, canopy, or membrane structure*.

432.14.17.2.1 Quantity limit. Fuel in the fuel tank shall not exceed one-quarter of the tank capacity or 5 gallons (19 L), whichever is less.

432.14.17.2.2 Inspection. Fuel systems shall be inspected for leaks.

432.14.17.2.3 Closure. Fuel tank openings shall be locked and sealed to prevent the escape of vapors.

432.14.17.3 Location. The location of vehicles or equipment shall not obstruct *means of egress*.

432.14.17.4 Places of assembly. When a compressed natural gas (CNG) or liquefied petroleum gas (LP-gas) powered vehicle is parked inside a place of assembly, all the following conditions shall be met:

1. The quarter-turn shutoff valve or other shutoff valve on the outlet of the CNG or LP-gas container shall be closed and the engine shall be operated until it stops. Valves shall remain closed while the vehicle is indoors.
2. The hot lead of the battery shall be disconnected.
3. Dual-fuel vehicles equipped to operate on gasoline and CNG or LP-gas shall comply with this section and Sections 432.14.17.1 through 432.14.17.5.3 for gasoline-powered vehicles.

432.14.17.5 Competitions and demonstrations. Liquid and gas-fueled vehicles and equipment used for competition or demonstration within a *tent, canopy, or*

membrane structure shall comply with Sections 432.14.17.5.1 through 432.14.17.5.3.

432.14.17.5.1 Fuel storage. Fuel for vehicles or equipment shall be stored in *approved* containers in an *approved* location outside of the *structure* in accordance with Section 432.14.17.2.

432.14.17.5.2 Fueling. Refueling shall be performed outside of the *structure* in accordance with Section 432.14.16.3

432.14.17.5.3 Spills. Fuel spills shall be cleaned up immediately.

432.14.18 Separation of generators. Generators and other internal combustion power sources shall be separated from *tents, canopies, or membrane structures* by a minimum of 20 feet (6096 mm), and shall be isolated from contact with the public by fencing, enclosure, or other *approved* means.

432.14.19 Standby personnel. When, in the opinion of the *building official*, it is essential for public safety in a *tent, canopy, or membrane structure* used as a place of assembly or any other use where people congregate, because of the number of persons, or the nature of the performance, exhibition, display, contest, or activity, the *owner*, agent, or lessee shall employ one or more qualified persons, as required and approved by the *building official*, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

432.14.19.1 Duties. Before each performance or the start of such activity, standby personnel shall keep diligent watch for fires during the time such place is open to the public or such activity is being conducted and take prompt measures for extinguishment of fires that occur and assist in the evacuation of the public from the *structure*.

432.14.19.2 Crowd managers. There shall be trained crowd managers or crowd manager supervisors at a ratio of one crowd manager/supervisor for every 250 occupants, as approved.

432.14.20 Vegetation removal. Where public safety is compromised as determined by the authority having *jurisdiction*, combustible vegetation shall be removed from the area occupied by a *tent, canopy, or membrane structure*, and from areas within 30 feet (9144 mm) of such structures.

432.14.21 Waste material. The floor surface inside *tents, canopies, or membrane structures* and the grounds outside and within a 30-foot (9144 mm) perimeter shall be kept clear of combustible waste. Such waste shall be stored in *approved* containers until removed from the premises.

432.15 Temporary stages, platforms, and overhead support structures. All *temporary stages, platforms, and overhead support structures* associated with *temporary stages and temporary platforms* erected for less than 30 days shall be in accordance with this section.

Exceptions:

1. *Temporary stages and platforms* with no overhead support structures, limited to 12 individuals, and using ground supported lights, sound, scenery, and equipment, and provided that the *stage or platform* meets the minimum live load requirements of Table 1607.1.
2. A *temporary stage or platform*, not exceeding 600 sq. ft., that is on a wheeled vehicle that is not designed as a *temporary stage or platform* is deemed to comply if the weight per axle of the wheeled vehicle is not exceeded by the total weight of all persons and items located on the stage.

432.15.1 Overhead support structures. Overhead support structures associated with *temporary stages and temporary platforms* shall be designed, erected, and maintained in accordance with ANSI E1.21-2013 *Entertainment Technology – Temporary Structures Used for Technical Production of Outdoor Entertainment Events* and applicable sections of this code.

432.15.2 Handrails, ramps, guards, and stairways. *Handrails, ramps, guards, and stairways* shall be constructed as required by Chapter 10 of this code.

432.15.3 Elevated floor systems. Any elevated floor system that supports *temporary stages or platforms* shall be designed or certified by a *registered design professional*, documenting that such an elevated system can support the dead and live loads.

SECTION 433 GREENHOUSES

433.1 General. The provisions of this section shall apply to *buildings or structures* utilized as greenhouses, including *controlled environment agriculture facilities*.

433.2 Definitions. The following terms are defined in Chapter 2:

**COMMERCIAL GREENHOUSE.
CONTROLLED ENVIRONMENT AGRICULTURE
FACILITY
PRODUCTION GREENHOUSE.**

433.3 Facility classification. Greenhouses shall be classified as either *commercial greenhouses, controlled environment agriculture facilities, or production greenhouses*.

433.3.1 Commercial greenhouses. Greenhouses that contain occupiable space, utilized for the processing, or packing of agricultural products or accessed by the public shall be classified as *commercial greenhouses* and shall comply with all applicable provisions of this code based upon the intended use and shall not be considered *agricultural buildings*.

433.3.2 Controlled environment agriculture facilities. Packing and shipping areas of *controlled environment agriculture facilities* shall be classified as Group F-2

occupancies in accordance with Section 306.3 and shall comply with Section 507.3 of this code. The storage and use of hazardous materials shall be in accordance with Section 307.1 and Tables 307.1(1) and 307.1(2). Rooms or spaces storing or utilizing quantities of hazardous materials in excess of the exempt amounts listed in Tables 307.1(1) or 307.1(2) shall comply with the area limitations of Sections 507.8 through 507.8.4 and an automatic sprinkler system shall be provided in accordance with Sections 903.2.5 and 903.2.5.1. Growing spaces of *controlled environment agriculture facilities* shall only be required to comply with Section 433.3.3 of this code.

433.3.3 Production greenhouses. *Production greenhouses* shall only be required to comply with Sections 433.3.3.1 through 433.3.3.2.

433.3.3.1 Structural design. *Production greenhouses* shall comply with the structural design requirements of this code or the National Greenhouse Manufacturers Association Structural Design Manual or equivalent. Structural design drawings shall bear the seal and signature of a *registered design professional*.

433.3.3.2 Exits and exit access doorways. Where a *building* or space has a calculated occupant load of 501 to 1,000 persons, a minimum of three (3) *exits* or *exit* access doorways shall be provided, with a maximum *exit* access travel distance of 400 feet to an *exit*. Where the calculated occupant load exceeds 1,000 persons, a minimum of four (4) *exits* or *exit* access doorways shall be provided, with a maximum *exit* access travel distance of 400 feet to an *exit*.

CHAPTER 5

GENERAL BUILDING HEIGHTS AND AREAS

SECTION 503

GENERAL BUILDING HEIGHT AND AREA LIMITATIONS

503.1.4 Day care centers. Day care center location and construction type shall be further limited in accordance with Table 425.13 in addition to compliance with the height and area limitations of Table 504.3, Table 504.4, and Table 506.2 for the *building* construction type.

SECTION 505

MEZZANINE AND EQUIPMENT PLATFORMS

505.3 Equipment platforms. *Equipment platforms* in *buildings* shall not be considered as a portion of the floor below. Such *equipment platforms* shall not contribute to either the *building area* or the number of *stories* as regulated by Section 503.1. The area of the *equipment platform* shall not be included in determining the *fire area* in accordance with Section 903. The walkways, *stairs*, *alternating tread devices*, and ladders providing access to an *equipment platform* shall not serve as part of the *means of egress* from the building.

505.3.1 Area limitation. The maximum area of *equipment platforms* shall be in accordance with 505.3.1.1 and 505.3.1.2.

505.3.1.1 Within a room. The aggregate area of all *equipment platforms* within a room shall not be greater than two-thirds of the area of the room in which they are located. Where an *equipment platform* is located in the same room as a *mezzanine*, the area of the *mezzanine* shall be determined by Section 505.2.1, and the combined aggregate area of the *equipment platforms* and *mezzanines* shall not be greater than two-thirds of the room in which they are located.

505.3.1.2 Within an attic. The aggregate area of all *equipment platforms* within an *attic* shall not be greater than 10 percent of the area of the *attic* in which they are located. A minimum of two, remotely located *means of egress* shall be provided from each *equipment platform* located within an *attic*, and access shall be provided by means of *stairways*, *alternating tread devices*, or ladders in accordance with Section 1011.

Exception: Equipment platforms in Group I-3 occupancies shall not be limited to 10 percent.

505.3.2 Automatic sprinkler system. Where located in a *building* that is required to be protected by an *automatic sprinkler system*, *equipment platforms* shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

505.3.3 Guards. *Equipment platforms* shall have *guards* where required by Section 1015.2.

SECTION 506 BUILDING AREA

506.3.1 Minimum percentage of perimeter. To qualify for an area factor increase based on frontage, a *building* shall have not less than 25 percent of its perimeter on a public way or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane constructed in accordance with the Section 503.2 Specifications of the International Fire Code.

Exception: An unoccupied space on an adjoining property may be included, provided the adjoining property is deeded and legally recorded so as to preclude, for the life of the *structure*, the erection of any *building* or *structure* on such unoccupied space.

SECTION 507 UNLIMITED AREA BUILDINGS

507.2.1 Reduced open space. The *public ways* or *yards* of 60 feet (18 288 mm) in width required in Sections 507.3, 507.4, 507.5, 507.6, and 507.12 shall be permitted to be reduced per either 507.2.1.1 or 507.2.1.2.

507.2.1.1 Reduced open space amount. The *public ways* or *yards* shall be permitted to be reduced to not less than 40 feet (12 192mm) in width provided all of the following requirements are met:

1. The reduced width shall not be allowed for more than 75 percent of the perimeter of the building;
2. The *exterior walls* facing the reduced width shall have a *fire-resistance rating* of not less than 3 hours; and
3. Openings in the exterior walls facing the reduced width shall have opening protectives with a *fire protection rating* of not less than 3 hours.

507.2.1.2 Open space elimination. The *public ways* or *yards* shall not be required provided all of the following requirements are met:

1. The eliminated open space shall not be allowed for more than 75 percent of the perimeter of the building;
2. The *exterior walls* facing the eliminated open space shall have a *fire-resistance rating* of not less than 4 hours; and
3. Openings in the *exterior walls* facing the eliminated open space shall have opening protectives with a *fire protection rating* of not less than 3 hours.

507.4.1 Mixed occupancy buildings with Groups A-1 and A-2. Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.3, provided all of the following criteria are met:

1. Group A-1 and A-2 occupancies are separated from other occupancies as required for separated occupancies in Section 508.4.4 with no reduction allowed in the *fire-resistance rating* of the separation based upon the installation of an *automatic sprinkler system*;

Exception: Within a single tenant space, no separation shall be required between an A-2 occupancy and M occupancy, when an emergency voice/alarm communication system is provided throughout, in accordance with Section 907.5.2.2.

2. Each area of the portions of the building used for Group A-1 or A-2 occupancies shall not exceed the maximum allowable area permitted for such occupancies in Section 503.1; and
3. *Exit* doors from Group A-1 and A-2 occupancies shall discharge directly to the exterior of the *building*.

SECTION 510 SPECIAL PROVISIONS

510.10 Use Group R. In *buildings* of Type 2B, 3B, or 5B construction with an occupancy of R, the first floor shall not be occupied for any other occupancy classification unless the R occupancy is separated from the other occupancies, whether beside or below the R occupancy, by a horizontal assembly and fire barrier constructed to afford a 1-hour fire resistance rating and the *exits* from the residential floors are separately enclosed in accordance with the requirements of Chapter 10.

Exceptions:

1. *Buildings* protected throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
2. Uses within live/work units complying with Section 419 are not considered separate occupancies.

**CHAPTER 6
TYPES OF CONSTRUCTION**

**TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)**

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Primary structural frame ^f (see Section 202)	3 ^a	2 ^a	1	0	1	0	HT	1	0
Bearing walls	3	2	1	0	2	2	2	1	0
Exterior ^{e, f}	3 ^a	2 ^a	1	0	1	0	1/HT	1	0
Interior									
Nonbearing walls and partitions	See Table 602								
Exterior									
Nonbearing walls and partitions	0	0	0	0	0	0	See Section 602.4.6	0	0
Interior ^d									
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and associated secondary members (see Section 202)	1 ^{1/2} b	1 ^{b,c}	1 ^{b,c}	0 ^c	1 ^{b,c}	0	HT	1 ^{b,c}	0

For SI: 1 foot = 304.8 mm.

- a. Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only. See Section 1510.9 for roofs containing rooftop structures.
- b. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
- c. In all occupancies, heavy timber shall be allowed where a 1-hour or less *fire-resistance rating* is required.
- d. Not less than the fire-resistance rating required by other sections of this code.
- e. Not less than the fire-resistance rating based on fire separation distance (see Table 602).
- f. Not less than the fire-resistance rating as referenced in Section 704.10.

**SECTION 603
COMBUSTIBLE MATERIAL IN TYPES I AND II
CONSTRUCTION**

603.1.2 Piping. The use of combustible piping materials shall be permitted where installed in accordance with the limitations of the *International Mechanical Code* and the Kentucky State Plumbing Code.

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

SECTION 706 FIRE WALLS

706.3 Materials. Fire walls shall be constructed of approved masonry or concrete materials that provide the strength and fire-resistance rating as specified by this code.

706.3 Materials. Section 706.3, Exception of the 2015 IBC shall be DELETED in its entirety.

SECTION 713 SHAFT ENCLOSURES

713.14 Elevator, dumbwaiter, and other hoistways. Elevator, dumbwaiter, and other hoistway enclosures shall be constructed in accordance with Section 713 and Chapter 30.

713.14.1 Enclosed elevator lobbies. Enclosed elevator lobbies shall be provided in accordance with Section 3006.

SECTION 718 CONCEALED SPACES

718.4.2 Groups R-1 and R-2. Draftstopping shall be provided in *attics*, mansards, overhangs, or other concealed roof spaces of Group R-2 *buildings* with three or more *dwelling units* and in all Group R-1 *buildings*. Draftstopping shall be installed above, and in line with, *sleeping unit* and *dwelling unit* separation walls that do not extend to the underside of the roof sheathing above.

Exceptions:

1. Where *corridor* walls provide a *sleeping unit* or *dwelling unit* separation, draftstopping shall only be required above one of the *corridor* walls.
2. Draftstopping is not required in *buildings* equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
3. In occupancies in Group R-2 that do not exceed four *stories above grade plane*, the *attic* space shall be subdivided by *draftstops* into areas not exceeding 3,000 square feet (279 m²) or above every two *dwelling units*, whichever is smaller.
4. Draftstopping is not required in *buildings* equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.2, provided that automatic sprinklers are also installed in the combustible concealed space where the draftstopping is being omitted.
5. When tenant, *guestroom*, and *dwelling unit* separation walls are constructed to the underside of a fire-resistance-rated floor/ceiling assembly or to a ceiling with a 60-minute finish rating, the *attic* draftstopping complying with Section 718.4.3 shall be deemed equivalent.

718.5 Combustible materials in concealed spaces in Type I or II construction. Combustible materials shall not be permitted in concealed spaces of *buildings* of Type I or II construction.

Exceptions:

1. Combustible materials in accordance with Section 603.
2. Combustible materials exposed within plenums complying with Section 602 of the *International Mechanical Code*.
3. Class A *interior finish* materials classified in accordance with Section 803.
4. Combustible piping within partitions or shaft enclosures installed in accordance with the provisions of this code.
5. Combustible piping within concealed ceiling spaces installed in accordance with the *International Mechanical Code* and the Kentucky State Plumbing Code.
6. Combustible insulation and covering on pipe and tubing, installed in concealed spaces other than plenums, complying with Section 720.7.

CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION 901 GENERAL

901.2 Fire protection systems. *Fire protection systems* shall be installed, repaired, operated, and maintained in accordance with this code and the Kentucky Standards of Safety (815 KAR 10:060). Any *fire protection system* for which an exception or reduction to the provisions of this code has been granted shall be considered to be a required system.

Exception: Any *fire protection system* or portion thereof not required by this code shall be permitted to be installed for partial or complete protection provided that such system meets the requirements of this code.

901.6.2 Fire alarm systems. Fire alarm systems required by the provisions of Section 907.2 of this code and Sections 907.2 and 907.9 of the *International Fire Code* shall be monitored by an *approved* supervising station in accordance with Section 907.6.6.

Exceptions:

1. Single and multiple station smoke alarms required by Section 907.2.11.
2. Smoke detectors in Group I-3 occupancies.
3. Supervisory service is not required for *automatic sprinkler systems* in one and two family *dwellings*.
4. Day care centers with 100 or less clients.
5. Places of religious worship or other similar religious facilities.

[F] 901.8 Pump and riser room size. Where provided, fire pump rooms and *automatic sprinkler system* riser rooms shall be designed with adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working room around the stationary equipment or 36 inches, whichever is greater. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair, or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Fire pump and *automatic sprinkler system* riser rooms shall be provided with a door or doors and unobstructed passageway large enough to allow removal of the largest piece of equipment.

SECTION 902 DEFINITIONS

902.1 Definitions. CONSTANTLY ATTENDED LOCATION of the 2015 IBC shall be DELETED in its entirety.

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

[F] 903.1.1 Alternative protection. Alternative *automatic fire-extinguishing systems* complying with Section 904 shall be permitted instead of automatic sprinkler protection where recognized by the applicable standard and *approved* by the *building official*.

[F] 903.2.1.1 Group A-1. An *automatic sprinkler system* shall be provided throughout *fire areas* containing Group A-1 occupancies where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m²); or
2. The *fire area* is located on a story other than a *level of exit discharge* serving such occupancies.

[F] 903.2.1.2 Group A-2. An *automatic sprinkler system* shall be provided throughout *fire areas* containing Group A-2 occupancies where one of the following conditions exists:

1. The *fire area* exceeds 5,000 square feet (464.5 m²);
2. The *fire area* has an *occupant load* of 300 or more; or
3. The *fire area* is located on a story other than a *level of exit discharge* serving such occupancies.

[F] 903.2.1.3 Group A-3. An *automatic sprinkler system* shall be provided throughout *fire areas* containing Group A-3 occupancies where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m²); or
2. The *fire area* is located on a story other than a *level of exit discharge* serving such occupancies.

Exception:

1. Places of religious worship and similar religious facilities or *buildings* utilized for worship or religious fellowship.
2. Areas used exclusively as participant sports areas where the main floor area is located at the same level as the *level of exit discharge* of the main entrance and *exit*.

[F] 903.2.1.4 Group A-4. An *automatic sprinkler system* shall be provided throughout *fire areas* containing Group A-4 occupancies where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m²); or
2. The *fire area* is located on a story other than a *level of exit discharge* serving such occupancies.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and *exit*.

[F] 903.2.8 Group R. An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all *buildings* with a use Group R in accordance with Sections 903.2.8.1 through 903.2.8.3.

[F] 903.2.8.1 Group R-1. An *automatic sprinkler system* shall be provided throughout *buildings* with a Group R-1 *fire area*.

Exceptions:

1. Where guestrooms are not more than three (3) stories above the lowest *level of exit discharge* and each guestroom has at least one door leading directly to an exterior *exit access* that leads directly to approved exits.
2. A residential sprinkler system installed in accordance with 903.3.1.2 shall be allowed in *buildings*, or portions thereof, of Group R-1.

903.2.8.2 Group R-2 and R-3. An *automatic sprinkler system* shall be provided throughout all *buildings* with a Group R-2 or R-3 occupancy more than two (2) stories in height, including basements.

Exceptions:

1. A residential sprinkler system installed in accordance with 903.3.1.2 shall be allowed in *buildings*, or portions thereof, of Group R-2 and R-3.
2. Bed-and-breakfast homes as defined in Section 310.2.

903.2.8.3 Group R-4. An *automatic sprinkler system* shall be provided throughout all *buildings* with a Group R-4 *fire area* with more than eight occupants.

Exception: An *automatic sprinkler system* installed in accordance with 903.3.1.2 or 903.3.1.3 shall be allowed in Group R-4 facilities.

[F] 903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an *approved* automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from a room merely because it is damp, of fire resistance rated construction, or contains electrical equipment.

1. A room where the application of water, or flame

- and water, constitutes a serious life or fire hazard.
2. A room or space where sprinklers are considered undesirable because of the nature of the contents, where *approved* by the *building official*.
3. Generator and transformer rooms separated from the remainder of the *building* by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Spaces or areas in telecommunications *buildings* used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries, and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the *building* by a wall with a *fire-resistance rating* of not less than 1 hour and a floor/ceiling assembly with a *fire-resistance rating* of not less than 2 hours.
6. In elevator machine rooms fully enclosed with 2-hour fire-resistance-rated construction and where signs are posted on the entry door and within the room to prohibit storage of any kind.

[F] 903.3.1.3 NFPA 13D sprinkler systems. *Automatic sprinkler systems* installed in one-and two-family *dwelling*s, Group R-3 and R-4, congregate residences, and *townhouses* shall be permitted to be installed throughout in accordance with NFPA 13D.

[F] 903.3.5 Water supplies. Water supplies for *automatic sprinkler systems* shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow by two (one-way) check valves, one of which may be an alarm check valve, installed at the point where the *automatic sprinkler system* piping is connected to the domestic water piping.

[F] 903.3.5.1 Underground installations. A combination water supply line shall be installed in accordance with the Kentucky State Plumbing Code or KRS 198B.550 through 198B.630. At the point where the water supply splits, one line serving the domestic water supply and the other to supply the fire protection sprinkler system, the domestic water supply line installation shall comply with the Kentucky State Plumbing Code while the supply line for the fire protection sprinkler system shall be installed in accordance with KRS 198B.550 through 198B.630.

Exception: A water supply line serving a system installed by a Kentucky licensed plumber in accordance with NFPA 13D.

[F] 903.3.5.2 Domestic services. Where the domestic service provides the water supply for the *automatic*

sprinkler system, the supply shall be in accordance with this section.

[F] **903.3.5.3 Residential combination services.** A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

[F] **903.4.1 Monitoring.** Alarm, supervisory, and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* central station, remote supervising station, or proprietary supervising station as defined by NFPA 72.

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

**SECTION 905
STANDPIPE SYSTEMS**

[F] **905.2 Installation standard.** Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912.

905.2.1 Piping design. The riser piping, supply piping, and the water service piping shall be hydraulically designed or pipe scheduled in accordance with NFPA 14 as referenced in Chapter 35 of this code. The system piping shall be sized to maintain the minimum residual pressure of 100 psi (6.9 bar) at the outlet of the hydraulically most remote 2 ½-inch (63.5-mm) hose connection and 65 psi (4.5 bar) at the outlet of the hydraulically most remote 1 ½-inch (38.1-mm) hose station.

Exception: The residual pressures of 100 psi (6.9 bar) and 65 psi (4.5 bar) are not required in *buildings* equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and where the highest floor level is not more than 150 feet (45720-mm) above the lowest level of fire department vehicle access.

**SECTION 907
FIRE ALARM AND DETECTION SYSTEMS**

[F] **907.2.1.1 System initiation in Group A occupancies with an occupant load of 1,000 or more.** Activation of the fire alarm in Group A occupancies with an *occupant load* of 1,000 or more shall initiate a signal using an emergency voice/alarm communications system in accordance with Section 907.5.2.2.

907.2.1.1 Exception. Section 907.2.1.1, Exception of the

2015 IBC shall be DELETED in its entirety.

[F] **907.2.3 Group E.** A manual *fire alarm system* that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building *fire alarm system*.

Exceptions:

1. A manual fire alarm system is not required in Group E occupancies with an *occupant load* of 50 or less.
2. Emergency voice/alarm communication systems meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall not be required in Group E occupancies with occupant loads of 100 or less, provided that activation of the manual fire alarm system initiates an *approved* occupant notification signal in accordance with Section 907.5.
3. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:
 - 3.1 Interior *corridors* are protected by smoke detectors;
 - 3.2 Auditoriums, cafeterias, gymnasiums, and similar areas are protected by *heat detectors* or other *approved* detection devices; and
 - 3.3 Shops and laboratories involving dusts or vapors are protected by *heat detectors* or other *approved* detection devices.
4. Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:
 - 4.1 The *building* is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1;
 - 4.2 The emergency voice/alarm communication system will activate on sprinkler waterflow; and
 - 4.3 Manual activation is provided from a normally occupied location.
5. Modular or portable educational *buildings* or clusters of such *buildings* in which the main building fire alarm is extended to the *buildings* or in which single-station smoke detectors are installed under the following conditions:
 - 5.1 Individual *buildings* or cluster of *buildings* with a total aggregate floor area of not more than 9500 square feet (672 m²).
 - 5.2 Each modular or portable *building* is separated from all other school *buildings* on the campus

by a minimum horizontal distance of 10 feet (3048 mm).

5.3 Smoke alarms are installed in each classroom and wired in series to sound an alarm in each classroom of the *building* or cluster of *buildings*. Spacing shall be 30 feet (9144mm) on center in corridors and 900 square feet (84m²) per detector in open spaces, or in accordance with the manufacturer specifications.

[F] 907.2.7.1 Occupant notification. During times that the *building* is occupied, the initiation of a signal from a manual fire alarm box or from a waterflow switch shall not be required to activate the alarm notification appliances when an alarm signal is activated from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.5.2.2.

[F] 907.2.11.5 Interconnection. Where more than one smoke alarm is required to be installed within an individual *dwelling unit* or *sleeping unit* in Group R or I-1 occupancies, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Smoke alarms that are permitted to be solely battery operated in accordance with 907.2.11.2 are not required to be interconnected.
2. Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the *structure*, unless there is an attic, crawl space, or basement available which could provide access for interconnection without the removal of interior finishes.

[F] 907.2.11.6 Power source. In new construction, required smoke alarms shall receive their primary power from the *building* wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system in accordance with Section 2702. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are not required to be equipped with battery backup in Group R-1 where they are connected to an emergency electrical system that complies with Section 2702.
2. Smoke alarms are permitted to be solely battery operated in existing *buildings*, *buildings* not served from a commercial power source, and in existing areas where alterations or repairs regulated by 907.2.10.1.4 do not result in the removal of interior wall or ceiling finishes exposing the *structure*, unless there is an attic, crawl space, or basement available which could provide access for *building* wiring without the removal of interior finishes.

[F] 907.2.13 High-rise buildings. High-rise *buildings* shall be provided with an *automatic smoke detection system* in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2, and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Sections 412 and 907.2.22.
2. *Open parking garages* in accordance with Section 406.5.
3. *Buildings* with an occupancy in Group A-5 in accordance with Section 303.1.
4. Low-hazard special occupancies in accordance with Section 503.1.1.
5. *Buildings* with an occupancy in Group H-1, H-2, or H-3 in accordance with Section 415.
6. In Group I-1 and I-2 occupancies, occupant notification shall be broadcast by the emergency voice/alarm communication system.

[F] 907.2.13.2 Fire department communication system. Where a wired communication system is *approved* in lieu of an emergency responder radio coverage system in accordance with Section 510 of the *International Fire Code*, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, *areas of refuge*, and inside *interior exit stairways*. The fire department communication device shall be provided at each floor level within the *interior exit stairway*.

Exception: Fire department radio systems where approved by the fire department.

[F] 907.2.18 Underground buildings with smoke control systems. Where a smoke control system is installed in an

underground *building* in accordance with this code, automatic smoke detectors shall be provided in accordance with Section 907.2.18.1.

[F] 907.2.18.1 Smoke detectors. Not fewer than one smoke detector *listed* for the intended purpose shall be installed in all of the following areas:

1. Mechanical equipment, electrical, transformer, telephone equipment, elevator machine, or similar rooms;
2. Elevator lobbies;
3. The main return and exhaust air plenum of each air-conditioning system serving more than one *story* and located in a serviceable area downstream of the last duct inlet; and
4. Each connection to a vertical duct or riser serving two or more floors from return air ducts or plenums of heating, ventilating and air-conditioning systems, except that in Group R occupancies, a *listed* smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m³/s) and serving not more than 10 air-inlet openings.

[F] 907.2.18.2 Alarm required. Activation of the smoke control system shall activate an audible alarm at an approved receiving station in accordance with Section 903.4.1.

[F] 907.3 Fire safety functions. Automatic fire detectors utilized for the purpose of performing *fire safety functions* shall be connected to the building's *fire alarm control unit* where a *fire alarm system* is required by Section 907.2. Detectors shall, upon actuation, perform the intended function and activate the *alarm notification appliances*. In buildings not equipped with a *fire alarm system*, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72.

[F] 907.3.1 Duct smoke detectors. *Smoke detectors* installed in ducts shall be *listed* for the air velocity, temperature, and humidity present in the duct. *Duct smoke detectors* shall be connected to the building's *fire alarm control unit* when a *fire alarm system* is required by Section 907.2. Activation of a *duct smoke detector* shall initiate a visible and audible supervisory signal and shall perform the intended fire safety function in accordance with this code and the *International Mechanical Code*. In facilities that are required to be monitored by a *supervising station*, *duct smoke detectors* shall report only as a *supervisory signal* and not as a fire alarm. They shall not be used as a substitute for required open area detection.

Exceptions:

1. In occupancies not required to be equipped with a *fire alarm system*, actuation of a *smoke detector* shall activate a visible and an audible signal in an

approved location. *Smoke detector* trouble conditions shall activate a visible or audible signal in an *approved* location and shall be identified as air duct detector trouble.

[F] 907.3.2 Delayed egress locks. Where delayed egress locks are installed on *means of egress* doors in accordance with Section 1010.1.9.7, an automatic smoke or heat detection system shall be installed as required by that section.

[F] 907.3.3 Elevator emergency operation. Automatic fire detectors installed for elevator emergency operation shall be installed in accordance with the provisions of ASME A17.1 and NFPA 72.

[F] 907.3.4 Wiring. The wiring to the auxiliary devices and equipment used to accomplish the fire safety functions shall be monitored for integrity in accordance with NFPA 72.

[F] 907.5 Occupant notification systems. A *fire alarm system* shall annunciate at the *fire alarm control unit* and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.3. Where a *fire alarm system* is required by another section of this code, it shall be activated by:

1. Automatic fire detectors;
2. *Automatic sprinkler system* waterflow devices;
3. Manual fire alarm boxes; or
4. Automatic fire-extinguishing systems.

[F] 907.5.1 Presignal feature. A presignal feature shall not be installed unless *approved* by the fire code official and the fire department. Where a presignal feature is provided, a signal shall be annunciated in order that occupant notification can be activated in the event of fire or other emergency.

SECTION 909

SMOKE CONTROL SYSTEMS

[F] 909.8 Exhaust method. Where *approved* by the *building official*, mechanical smoke control for large enclosed volumes, such as in atriums or malls, shall be permitted to utilize the exhaust method. Smoke control systems using the exhaust method shall be designed in accordance with this section.

909.8.1 Exhaust rate. The height of the lowest horizontal surface of the accumulating smoke layer shall be maintained at least 10 feet (3048 mm) above any walking surface that forms a portion of a required egress system within the smoke zone. The required exhaust rate for the zone shall be the largest of the calculated plume mass flow rates for the possible plume configurations. Provisions shall be made for natural or mechanical supply of air from outside or adjacent smoke zones to make up for the air exhausted. Makeup airflow rates, when measured at the potential fire location, shall not exceed 200 feet per minute

(60960 mm per minute) toward the fire. The temperature of the makeup air shall be such that it does not expose temperature-sensitive fire protection systems beyond their limits.

909.8.1.1 Exhaust rate alternative. Where the design exhaust rate of 909.8.1 would require excessive air changes per hour, the smoke control system shall be capable of exhausting not less than the following quantities of air unless the engineered design complies with 909.8.1 and allows for a lesser air change rate, but in no case shall the rate be less than two air changes per hour:

1. For atriums and malls having a volume of not more than 600,000 cubic feet (16800 m³), including the volume of any levels not physically separated from the atrium or mall, not less than 40,000 cubic feet per minute (18.88 m³/s) nor less than six air changes per hour.
2. For atriums and malls having a volume of more than 600,000 cubic feet (16800 m³), including the volume of any levels not physically separated from the atrium or mall, not less than four air changes per hour.

[F] 909.9 Design fire. The design fire shall be based on a rational analysis performed by the *registered design professional* and *approved* by the building official. The design fire shall be based on the analysis in accordance with Section 909.4 and this section.

[F] 909.9.1 Factors considered. The engineering analysis shall include the characteristics of the fuel, fuel load, effects included by the fire and whether the fire is likely to be steady or unsteady.

[F] 909.9.2 Design fire fuel. Determination of the design fire shall include consideration of the type of fuel, fuel spacing, and configuration.

[F] 909.9.3 Heat-release assumptions. The analysis shall make use of best available data from *approved* sources and shall not be based on excessively stringent limitations of combustible material.

[F] 909.9.4 Sprinkler effectiveness assumptions. A documented engineering analysis shall be provided for conditions that assume fire growth is halted at the time of sprinkler activation.

[F] 909.18.8.3 Reports. A complete report of testing shall be prepared by the *approved* agency. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values, and identification tag or *mark*. The report shall be reviewed by the responsible *registered design professional* and, when satisfied that the design intent has been achieved, the responsible *registered design professional* shall sign, seal and date the report.

[F] 909.18.8.3.1 Report filing. A copy of the final report shall be filed with the *building official* and an identical copy shall be maintained in an *approved* location at the *building*.

[F] 909.19 System acceptance. *Buildings*, or portions thereof, required by this code to comply with this section shall not be issued a certificate of occupancy until such time that the *building official* determines that the provisions of this section have been fully complied with and that the fire department has received satisfactory instruction on the operation, both automatic and manual, of the system, and a written maintenance program complying with the requirements of Section 909.20.1 of the *International Fire Code* has been submitted and approved by the fire code official.

Exception: In *buildings* of phased construction, a temporary certificate of occupancy, as *approved* by the *building official*, shall be allowed if those portions of the *building* to be occupied meet the requirements of this section and that the remainder does not pose a significant hazard to the safety of the proposed occupants or adjacent *buildings*.

SECTION 910

SMOKE AND HEAT REMOVAL

910.2 Where required. *Approved* smoke and heat vents shall be installed in the roofs of one-story *buildings* or portions thereof occupied for the uses set forth in 910.2.1 through 910.2.3.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an *approved automatic sprinkler system*.
2. Smoke and heat removal shall not be required in areas of *buildings* equipped with early suppression fast-response (ESFR) sprinklers.
3. Smoke and heat removal shall not be required in areas of *buildings* equipped with control mode special application sprinklers with a response time index of 50 (m · s)^{1/2} or less that are listed to control a fire in stored commodities with 12 or few sprinklers.

910.2.1 High-piled combustible storage. *Buildings* and portions thereof containing high-piled combustible stock or rack storage in any occupancy group in accordance with 413 and the *International Fire Code*.

910.2.2 Group H. *Buildings* and portions thereof used as a Group H occupancy in accordance with Section 415.6.

**SECTION 912
FIRE DEPARTMENT CONNECTIONS**

[P] 912.6 Backflow protection. The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow by two (2), one-way check valves. One of the two required check valves may be an alarm check valve installed at the point where the automatic sprinkler system piping is connected to the domestic water piping.

**SECTION 913
FIRE PUMPS**

[F] 913.4 Valve supervision. Where provided, the fire pump suction, discharge, and bypass valves, and isolation valves on the backflow prevention device or assembly shall be supervised in the open position by one of the following methods:

1. Central-station, proprietary or remote-station signaling service;
2. Locking jockey pump control valves open; or
3. Sealing of valves and *approved* weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

[F] 913.4.1 Test outlet valve supervision. Fire pump test outlet valves shall be supervised in the closed position.

**SECTION 915
CARBON MONOXIDE DETECTION**

[F] 915.1 General. Carbon monoxide detection shall be installed in new *buildings* in accordance with Sections 915.1.1 through 915.6. Carbon monoxide detection shall be installed in existing *buildings* in accordance with Chapter 11 of the *International Fire Code*.

[F] 915.1.1 Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

[F] 915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in *dwelling units*, *sleeping units*, and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

[F] 915.1.3 Forced-air furnaces. Carbon monoxide detection shall be provided in *dwelling units*, *sleeping units*, and classrooms served by a fuel-burning, forced-air furnace.

Exception: Carbon monoxide detection shall not be required in *dwelling units*, *sleeping units*, and classrooms if carbon monoxide detection is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

**SECTION 917
YARD HYDRANTS**

917.1 Private hydrants. Fire hydrants installed on private property as part of a private fire protection system shall be located to meet the requirements of NFPA 24 listed in Chapter 35, except that hydrants shall be spaced so that the hose line does not exceed 500 feet (152m). Yard hydrant installation shall be coordinated with the local fire code officials who shall not make recommendations that exceed the requirements of NFPA 24. Yard hydrants shall not be installed on a water main less than 6 inches (152mm) in diameter.

917.2 Public hydrants. Public hydrants not covered by NFPA 24 listed in Chapter 35 shall conform to the standards of the administrative authority of the *jurisdiction* as provided by local government.

**CHAPTER 10
MEANS OF EGRESS**

1004.1.2 Areas without fixed seating. The exception to this section shall be deleted in its entirety.

**TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT**

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR^a
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit gallery and museum	30 net
Assembly with fixed seats	See Section 1004.4
Assembly without fixed seats	
Concentrated (chairs only—not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shop and other vocational room areas	50 net
Exercise rooms	50 gross
Group H-5 Fabrication and manufacturing areas	200 gross
Industrial areas ^b	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mall buildings—covered and open	See Section 402.8.2
Mercantile	60 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m², 1 foot = 304.8 mm.

a. Floor area in square feet per occupant.

b. Use a value of 200 gross for purposes of determining jurisdiction under Section 104.15 and 104.16 and design professional seal requirements in Section 122.1.

**TABLE 1006.3.2(1)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE
Basement, first, second, or third story above grade plane	R-2 ^{a, b, c}	4 dwelling units	50 feet
Fourth story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 3048 mm.

NP = Not Permitted

NA = Not Applicable.

- This table is used for R-2 occupancies consisting of *dwelling units*. For R-2 occupancies consisting of *sleeping units*, use Table 1006.3.2(2).
- The number of dwelling units that share a single exit may exceed 4 per floor where each 4 *dwelling units* sharing a single *exit* are separated from other groups of 4 *dwelling units* sharing a single *exit* by not less than a 2-hour *fire barrier* wall constructed in accordance with Section 707 of this code.
- If the *building* is protected throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, the maximum *exit access* travel distance in *buildings* classified as Group R-2 shall not be more than 125 feet in length.

**SECTION 1008
MEANS OF EGRESS ILLUMINATION**

1008.2 Illumination required. The *means of egress* serving a room or space shall be illuminated at all times the room or space is occupied. The required illumination at the *exit discharge* shall illuminate the path of egress travel for a distance not less than 30 feet measured from the center of the *exit discharge* door.

Exceptions:

- Occupancies in Group U.
- Aisle accessways* in Group A.
- Dwelling units* and *sleeping units* in Groups R-1, R-2, and R-3.
- Sleeping units* of Group I occupancies.

1008.2.1 Illumination level under normal power. The *means of egress* illumination level shall be not less than 1 foot-candle (11 lux) at the walking surface.

Exception: For auditoriums, theaters, concert or opera halls, and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods if the required illumination is automatically restored upon activation of a premises' fire alarm system:

- Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 foot-candle (2.15 lux).
- Steps, landings, and the sides of ramps shall be permitted to be marked with self-luminous materials in accordance with Sections 1025.2.1,

1025.2.2, and 1025.2.4 by systems listed in accordance with UL 1994.

1008.2.2 Exit discharge. Section 1008.2.2 of the 2015 IBC shall be DELETED in its entirety.

**SECTION 1010
DOORS, GATES AND TURNSTILES**

1010.1.9.7 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving any occupancy except Group A, Group E, and Group H in *buildings* that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke or heat detection system* installed in accordance with Section 907. The locking system shall be installed and operated in accordance with all of the following:

- The delay electronics of the delayed egress locking system shall deactivate upon actuation of the *automatic sprinkler system* or *automatic fire detection system*, allowing immediate, free egress.
- The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
- The delayed egress locking system shall have the capability of being deactivated at the *fire command center* and other *approved* locations.
- An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3

seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exception: In Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:
 - 6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
 - 6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
 - 6.3. The sign shall comply with the visual character requirements in ICC A117.1.

Exception: Where approved, in Group I occupancies, the installation of a sign is not required where care recipients who because of clinical needs require restraint or containment as part of the function of the treatment area.

7. Emergency lighting shall be provided on the egress side of the door.
8. The delayed egress locking system units shall be listed in accordance with UL 294.

1010.1.9.7.1 Judicial centers. Judicial centers under the control of the Administrative Office of the Courts that have an egress door located along the path of travel that enters a judge's suite, chambers, or area shall be allowed to be controlled by delayed egress locks subject to the provisions of Section 1010.1.9.7, items 1 through 8.

1010.1.9.7.2 Licensed day care centers. Group E day care centers licensed by the Cabinet for Health and Family Services shall be allowed to have egress doors controlled by delayed egress locks subject to the provisions of Section 1010.1.9.7, items 1 through 8.

SECTION 1011 STAIRWAYS

1011.5.2 Riser height and tread depth. Stair riser heights shall be 7 inches maximum (178 mm) and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the *nosings* of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's *nosing*. *Winder* treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline and a minimum tread depth of 10 inches (254 mm) within the clear width of the stair.

Exceptions:

1. *Spiral stairways* in accordance with Section 1011.10.
2. *Stairways* connecting stepped *aisles* to cross *aisles* or concourses shall be permitted to use the riser/tread dimension in Section 1029.13.2.
3. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual *dwelling units* in Group R-2 occupancies; the maximum riser height shall be 8 ¼ inches (210 mm); the minimum tread depth shall be 9 inches (229 mm); the minimum *winder* tread depth at the walkline shall be 10 inches (254 mm); and the minimum *winder* tread depth shall be 6 inches (152 mm). A *nosing* projection not less than ¾ inch (19.1 mm) but not more than 1 ¼ inches (32 mm) shall be provided on *stairways* with solid risers where the tread depth is less than 11 inches (279 mm).
4. See Section 403.1 of the *International Existing Building Code* for the replacement of existing *stairways*.
5. In Group I-3 facilities, *stairways* providing access to guard towers, observation stations, and control rooms, not more than 250 square feet (23 m²) in area, shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).
6. *Stairways* providing access into or from swimming pools, spas, or baptisteries with the tread surface entirely below water shall have treads and risers that conform to the following:
 - 6.1. Step treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed surface area of 240 square inches (0.15 m²).

- 6.2. Risers shall have a maximum uniform height of 12 inches (305 mm) as measured at the centerline of the tread. The height of the bottom riser shall not vary more than plus or minus 2 inches (51 mm) from the uniform riser height.

SECTION 1012 RAMPS

1012.2 Slope. Ramps used as part of a means of egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8.33-percent slope). The slope of other pedestrian ramps shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

SECTION 1014 HANDRAILS

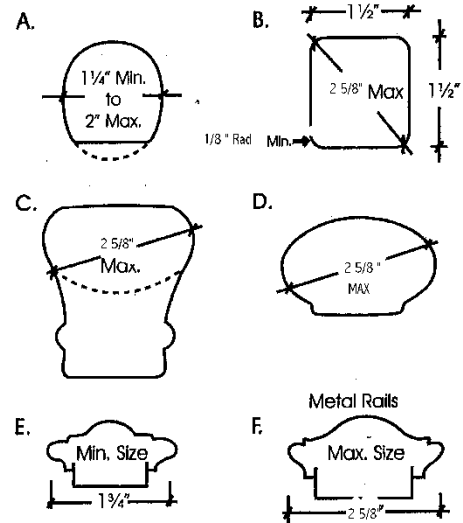
1014.3 Handrail graspability. Required handrails shall comply with Section 1014.3.1 or shall provide equivalent graspability as detailed in Figure 1014.3.

Exception: In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual *dwelling units* in Group R-2 occupancies; handrails shall be Type I in accordance with Section 1014.3.1, Type II in accordance with Section 1014.3.2, or shall provide equivalent graspability.

1014.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1 ¼ inches (32 mm) and not greater than 2 inches (51 mm). Where the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches (102 mm) and not greater than 6 ¼ inches (160 mm) with a maximum cross-sectional dimension of 2 ¼ inches (57 mm) and minimum cross-sectional dimension of 1 inch (25 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

1014.3.2 Type II. Handrails with a perimeter greater than 6 ¼ inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than ¾ inch (10 mm) to a level that is not less than 1 ¼ inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1 ¼ inches (32 mm) to not greater than 2 ¾ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

**Figure 1014.3
HANDRAIL PROFILES**



1014.4 Continuity. Handrail gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within *dwelling units* are permitted to be interrupted by a newel post at a turn or landing.
2. Within a *dwelling unit*, the use of a volute, turnout, starting easing, or starting newel is allowed over the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 11/2 inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each 1/2 inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 11/2 inches (38 mm) shall be permitted to be reduced by 1/8 inch (3.2 mm).
4. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of the handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.
5. Handrails serving stepped aisles or ramped aisles are permitted to be discontinuous in accordance with Section 1029.15.1.
6. Stair handrails within *dwelling units* shall be permitted to be discontinuous between the top and bottom of a flight of stairs where the ends of the discontinued rails are returned to a wall or post and

the maximum distance between the discontinued rails is not greater than 4 inches (102 mm).

SECTION 1015 GUARDS

1015.3 Height. Required *guards* shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces.
2. On *stairways* and stepped *aisles*, from the line connecting the leading edges of the tread *nosing*.
3. On *ramps* and ramped *aisles*, from the *ramp* surface at the *guard*.

Exceptions:

1. For occupancies in Group R-3 not more than three stories above grade in height and within individual *dwelling units* in occupancies in Group R-2 not more than three stories above grade in height with separate *means of egress*, required *guards* shall be not less than 36 inches (914 mm) in height measured vertically from the adjacent walking surfaces or adjacent *fixed seating* whichever is at the higher elevation.
2. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, *guards* on the open sides of *stairs* shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
3. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, where the top of the *guard* also serves as a *handrail* on the open sides of *stairs*, the top of the *guard* shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
4. The *guard* height in assembly seating areas shall comply with Section 1029.16 as applicable.
5. Along *alternating tread devices* and ships ladders, *guards* where the top rail also serves as a *handrail* shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread *nosing*.

1015.8 through 1015.8.1 Window Openings. Sections 1015.8 through 1015.8.1 shall be DELETED in their entirety.

SECTION 1023 INTERIOR EXIT STAIRWAYS AND RAMPS

1023.5 Penetrations. Penetrations into or through *interior exit stairways* and *ramps* are prohibited except for noncombustible refrigerant or hydronic piping necessary for

heating or cooling the *exit* enclosure, equipment and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication systems, and electrical raceway serving the *interior exit stairway* and *ramp* and terminating at a steel box not exceeding 16 square inches (0.010 m²). Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communication openings, whether protected or not, between adjacent *interior exit stairways* and *ramps*.

1023.5 Penetrations. Section 1023.5 of the 2015 IBC shall be DELETED in its entirety.

1023.6 Ventilation. Equipment and ductwork for *interior exit stairway* and *ramp* ventilation as permitted by Section 1023.5 shall comply with one of the following items:

1. Such equipment and ductwork shall be located exterior to the building and shall be directly connected to the *interior exit stairway* and *ramp* by ductwork enclosed in construction as required for shafts.
2. Where such equipment and ductwork is located within the *interior exit stairway* and *ramp*, the intake air shall be taken directly from the outdoors and the exhaust air shall be discharged directly to the outdoors, or such air shall be conveyed through ducts enclosed in construction as required for shafts.
3. Where located within the building, such equipment and ductwork shall be separated from the remainder of the building, including other mechanical equipment, with construction as required for shafts.
4. Unitary HVAC equipment utilizing refrigerant or chilled and hot water for cooling and heating, such as fan coil units, shall be permitted to be installed within the *exit* enclosure. Noncombustible supply, return, and condensate piping required for the operation of the fan coil unit, shall be allowed to penetrate the *exit* enclosure at one location each.

In each case, openings into the *fire-resistance-rated* construction shall be limited to those needed for maintenance and operation, and shall be protected by opening protectives in accordance with Section 716 for shaft enclosures.

The *interior exit stairway* and *ramp* ventilation systems shall be independent of other *building* ventilation systems.

SECTION 1028 EXIT DISCHARGE

1028.6 Exit discharge protection. A required *means of egress* shall not discharge directly into a vehicular path unless guards are provided to prevent vehicles from hitting the exit door in its outward opened position and to direct pedestrians in a path running parallel to the vehicular path. The guards shall prevent the exit discharge door from being blocked by movable objects such as dumpsters or parked vehicles.

**TABLE 1020.1
CORRIDOR FIRE-RESISTANCE RATING**

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system ^c
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	1	0.5
I-2 ^a	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 ^b

- For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3.
- For a reduction in the *fire-resistance rating* for occupancies in Group I-3, see Section 408.8.
- Buildings* equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.

**SECTION 1029
ASSEMBLY**

1029.6 Capacity of aisle for assembly. The required capacity of *aisles* and other *means of egress* that are integral with assembly seating shall be not less than that determined in accordance with Section 1029.6.1 where *smoke-protected assembly seating* is not provided and with Section 1029.6.2 or 1029.6.3 where *smoke-protected assembly seating* is provided. Stairs, ramps, passageways, and doors that are not integral with assembly seating but serve as the *means of egress* from levels which contain assembly seating shall be constructed in accordance with Section 1010 Doors, 1011 Stairs, 1012 Ramps, and 1016 Exit Access. *Means of egress* sizing shall be in accordance with Section 1005, but shall not be required to exceed the calculated width of the stairs, ramps, and aisles that are integral with the assembly seating.

1029.6.1 Without smoke protection. The required capacity in inches (mm) of the *aisles* for assembly seating without smoke protection shall be not less than the *occupant load* served by the egress element in accordance with all of the following, as applicable:

- Not less than 0.3 inch (7.6 mm) of *aisle* capacity for each occupant served shall be provided on stepped *aisles* having riser heights 7 inches (178 mm) or less and tread depths 11 inches (279 mm) or greater, measured horizontally between tread *nosings*.
- Not less than 0.005 inch (0.127 mm) of additional *aisle* capacity for each occupant shall be provided for each 0.10 inch (2.5 mm) of riser height above 7 inches (178 mm).
- Where egress requires stepped *aisle* descent, not less than 0.075 inch (1.9 mm) of additional *aisle* capacity for each occupant shall be provided on those portions of *aisle* capacity having no *handrail* within a horizontal distance of 30 inches (762 mm).

- Ramped *aisles*, where slopes are steeper than one unit vertical in 12 units horizontal (8.33-percent slope), shall have not less than 0.22 inch (5.6 mm) of clear *aisle* capacity for each occupant served. Level or ramped *aisles*, where slopes are not steeper than one unit vertical in 12 units horizontal (8.33-percent slope), shall have not less than 0.20 inch (5.1 mm) of clear *aisle* capacity for each occupant served.

1029.13.1 Ramped aisles. *Aisles* that are sloped more than one unit vertical in 20 units horizontal (5-percent slope) shall be considered a ramped *aisle*. Ramped *aisles* that serve as part of an *accessible route* in accordance with Sections 1009 and 1108.2 shall have a maximum slope of one unit vertical in 12 units horizontal (8.33-percent slope). The slope of other ramped *aisles* shall not exceed one unit vertical in 8 units horizontal (12.5-percent slope).

1029.15.1 Discontinuous handrails. Where there is seating on both sides of the *aisle*, the mid-*aisle handrails* shall be discontinuous with gaps or breaks at intervals not less than three rows and not exceeding five rows to facilitate access to seating and to permit crossing from one side of the *aisle* to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally. Where handrails are not a continuous single rail between cross-over gaps or breaks, multiple shorter handrails shall be allowed with the horizontal spacing between the rails measured parallel to the rail support, being less than or equal to 10 ½ inches. The mid-*aisle handrail* shall have rounded terminations or bends.

1029.15.1.1 Handrail extensions. Within aisle stairs, the horizontal extension is not required beyond the bottom or top riser, provided the *handrail* begins at the first riser

and is continuous, except where gaps or breaks are permitted in Section 1029.13.1 to the top row of seats.

SECTION 1030 EMERGENCY ESCAPE AND RESCUE

1030.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R occupancies as applicable in Section 101.2. Sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, *emergency escape and rescue openings* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

Exceptions:

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.
2. *Emergency escape and rescue openings* are not required from *basements* or sleeping rooms that have an *exit door* or *exit access door* that opens directly into a *public way* or to a *yard*, *court* or exterior exit balcony that opens to a *public way*.
3. *Basements* without *habitable spaces* and having not more than 200 square feet (18.6 m²) in floor area shall not be required to have *emergency escape and rescue openings*.
4. Buildings equipped throughout with an approved *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
5. Sleeping rooms provided with a door to a fire-resistance-rated corridor having access to two remote exits in opposite directions.
6. Replacement of emergency escape and rescue windows that meet or exceed the provisions of the applicable code at the time the facility was originally constructed.

**CHAPTER 11
ACCESSIBILITY**

**SECTION 1103
SCOPING REQUIREMENTS**

1103.2.12 Child care facilities. Areas or portions of buildings used for rendering care of children in child day care facilities are not required to comply with the provisions found in this chapter applicable to children. Those areas of child day care facilities used by staff or parents of the children shall be made accessible. This would include, but not be limited to, accessible parking, accessible route to the *building* or facility entrance, accessible route within the facility to all occupiable rooms and spaces, and toilet rooms.

1103.2.15 Church buildings. Buildings or portions thereof used as a place of religious worship and religious fellowship including family life centers are not required to comply with this chapter.

**SECTION 1104
ACCESSIBLE ROUTE**

1104.7 Public toilet facilities. Public toilet facilities shall be provided with an *accessible route* when located on an *accessible* level and shall not be accessed through an area of the *building* that is restricted or noted as restricted to "Employees Only."

1107.5.1.1 Accessible units. In Group I 1 at least four (4) percent, but not less than one, of the dwelling units and sleeping units shall be accessible units.

1107.6.4.1 Accessible Units. In Group R-4, at least one (1) of the dwelling units or sleeping units shall be an accessible unit. Bedrooms in Group R-4 facilities shall be counted as sleeping units for the purpose of determining the number of units.

CHAPTER 12
INTERIOR ENVIRONMENT

SECTION 1203
VENTILATION

1203.1 General. *Buildings* shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *International Mechanical Code*.

1203.7 Alternative mechanical system. Heating, ventilating, and air conditioning (HVAC) systems in occupancies reviewed under NFPA 101 pursuant to Section 117.1 of this code shall be installed in accordance with NFPA 90A or NFPA 90B in lieu of the mechanical code listed in Chapter 35.

SECTION 1206
YARDS OR COURTS

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 Kentucky State Plumbing Code.

SECTION 1210
TOILET AND BATHROOM REQUIREMENTS

1210.4 Toilet room location. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

CHAPTER 13 ENERGY EFFICIENCY

SECTION 1301 GENERAL

[E] **1301.1 Scope.** This chapter governs the design and construction of *buildings* for energy efficiency. The following amendments shall supersede the requirements of the 2012 *International Energy Conservation Code*.

1301.1.1 Criteria. *Buildings* shall be designed and constructed in accordance with the 2012 *International Energy Conservation Code*.

Exception:

1. Group R-2, R-3, and R-4 buildings that are three stories or less in height above grade plane shall comply with Chapter 4 of the 2009 *International Energy Conservation Code*.

1301.2 Basement walls. Walls associated with *basements* and that make up the *building's* thermal envelope shall be insulated from the inside or outside of the *basement* wall from the top of the *basement* wall down below grade to the design frost depth in accordance with Table 1809.5.

1301.3 Vestibules. *Building* entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the *building* entrance shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors. This section replaces Section C402.4.7 of the *International Energy Conservation Code*.

Exceptions: Vestibules are not required for the following:

1. Doors that have an *air curtain* with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air

curtain with the opening and closing of the door. *Air curtains* and their controls shall comply with Section C408.2.3.

2. Doors not intended to be used by the public, such as doors to mechanical or electrical equipment rooms, or intended solely for employee use.
3. Doors opening directly from a *sleeping unit* or *dwelling unit*.
4. Doors that open directly from a space less than 3,000 square feet (298 m²) in area.
5. Revolving doors.
6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.

1301.4 Low energy buildings. The following low energy *buildings*, or portion thereof separated from the remainder of the *building* by *building thermal envelope* assemblies complying with this section, shall be exempt from the *building thermal envelope* provisions of Section C402. This section replaces Section C101.5.2 of the *International Energy Conservation Code*.

1. Those with a peak design rate of energy usage less than 3.4 Btu/h · ft² (10.7W/m²) or 1.0 watt per square foot (10.7 W/m²) of floor area for space conditioning purposes.
2. Those that do not contain conditioned space.
3. *Production Greenhouses* and *Commercial Greenhouses*.
4. Factory or industrial *buildings* where ventilation is required for equipment cooling purposes only.

CHAPTER 14
EXTERIOR WALLS

SECTION 1411
WINDOW CLEANING SAFEGUARDS

1411.1 General. All *buildings* and *structures* over 50 feet (15240 mm) or four stories in height, in which the windows are cleaned from the outside, shall be provided with anchors, belt terminals, or other *approved* safety devices for all window openings. Such devices shall be of an *approved* design, and shall be constructed of corrosion-resistant materials securely attached to the window frames, to enclosure walls of the *building*, or to the roof structure. Cast-iron or cast bronzed anchors shall be prohibited.

CHAPTER 15
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

SECTION 1503
WEATHER PROTECTION

[P] 1503.4 Roof drainage. Design and installation of roof drainage systems shall comply with Sections 1503 and 1611 of this code, as applicable, in the Kentucky State Plumbing Code referenced in Chapters 29 and 35 of this code. The primary and secondary roof drainage systems shall comply with the requirements of Sections 1503.4.1 through 1503.4.2.

1503.4.1 Roof drains. Primary and secondary roof drains shall comply with the requirements of this section.

1503.4.1.1 Strainers. Roof drains shall have strainers extending not less than 4 inches (102 mm) above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, of not less than one and one-half times the area of the conductor or leader to which the drain is connected.

1503.4.1.2 Flat decks. Roof drain strainers for use on sun decks, parking decks, and similar areas that are normally serviced and maintained shall comply with Section 1503.4.1 or shall be of the flat surface type, installed level with the deck, with an available inlet area not less than two times the area of the conductor or leader to which the drain is connected.

1503.4.1.3 Drain Flashings. The connection between roofs and roof drains that pass through the roof and into the interior of the *building* shall be made watertight by the use of approved flashing material.

[P] 1503.4.2 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary (emergency overflow) roof drains or *scuppers* shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders, and conductors shall comply with Sections 1503.4.1 and 1503.4.2 of this code.

1503.4.2.1 Separate systems required. Secondary roof drain systems shall have piping and point of discharge separate from the primary system. Discharge shall be above grade in a location, which would normally be observed by the *building* occupants or maintenance personnel.

1503.4.2.2 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with the Kentucky State Plumbing Code based on the rainfall rate for which the primary system is designed. The secondary drain system shall be equal in size to the primary drain system.

1503.4.2.3 Scuppers. When *scuppers* are used for secondary (emergency overflow) roof drainage, the quantity, size, location, and inlet elevation of the *scuppers* shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1611.1. *Scuppers* shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when locating and sizing *scuppers*.

1503.4.2.4 Gutters. Gutters and leaders placed on the outside of *buildings*, other than Group R-3, private garages, and *buildings* of Type V construction, shall be of noncombustible material or a minimum of Schedule 40 plastic pipe.

SECTION 1507
REQUIREMENTS FOR ROOF COVERING

1507.4.6 Snow and ice guards. *Structures* with roofs constructed of metal panels with slopes equal or greater than four units vertical in twelve units horizontal (33% or 4:12 slope) shall be provided with permanently attached guards sufficient to prevent large ice and snow slides.

CHAPTER 16 STRUCTURAL DESIGN

SECTION 1601 GENERAL

1601.2 Certificate of compliance. Design compliance with the provisions of this chapter and Chapter 18 shall be satisfied when certification of an architect or engineer registered in Kentucky to that effect is placed on the drawings submitted to the *building official*, unless the *building official* notifies the *registered design professional* that a specific code violation exists.

SECTION 1602 DEFINITIONS AND NOTATIONS

1602.1 Definitions. The following terms are defined in Chapter 2:

ALLOWABLE STRESS DESIGN.

DEAD LOADS.

DESIGN STRENGTH.

DIAPHRAGM.

Diaphragm, blocked.

Diaphragm boundary.

Diaphragm chord.

ESSENTIAL FACILITIES.

FABRIC PARTITION.

FACTORED LOAD.

HELIPAD.

ICE-SENSITIVE STRUCTURE.

IMPACT LOAD.

LIMIT STATE.

LIVE LOAD.

LIVE LOAD (ROOF).

LOAD AND RESISTANCE FACTOR DESIGN (LRFD).

LOAD EFFECTS.

LOAD FACTOR.

LOADS.

NOMINAL LOADS.

OTHER STRUCTURES.

PANEL (PART OF A STRUCTURE).

RATIONAL ANALYSIS

RESISTANCE FACTOR.

RISK CATEGORY.

STRENGTH, NOMINAL.

STRENGTH, REQUIRED.

STRENGTH DESIGN.

SUSCEPTIBLE BAY.

VEHICLE BARRIER.

NOTATIONS.

D = Dead load.

D_i = Weight of ice in accordance with Chapter 10 of ASCE 7.

E = Combined effect of horizontal and vertical earthquake induced forces as defined in Section 12.4.2 of ASCE 7.

F = Load due to fluids with well-defined pressures and maximum heights.

F_a = Flood load in accordance with Chapter 5 of ASCE 7.

H = Load due to lateral earth pressures, ground water pressure or pressure of bulk materials.

L = Roof live load greater than 20 psf (0.96 kN/m²) and floor live load.

L_r = Roof live load of 20 psf (0.96 kN/m²) or less.

R = Rain load.

S = Snow load.

T = Self-straining load.

V_{asd} = Nominal design wind speed (3-second gust), miles per hour (mph) (km/hr) where applicable.

V_{ult} = Ultimate design wind speeds (3-second gust), miles per hour (mph) (km/hr) determined from Figure 1609.3(1), 1609.3(2), 1609.3(3) or ASCE 7.

W = Load due to wind pressure.

W_i = Wind-on-ice in accordance with Chapter 10 of ASCE

SECTION 1603

CONSTRUCTION DOCUMENTS

1603.1.5 Earthquake design data. The following information related to seismic loads shall be shown, regardless of whether seismic loads govern the design of the lateral force-resisting system of the structure:

1. Risk category.
2. Seismic importance factor, I_e .
3. Mapped spectral response acceleration parameters, S_S and S_I .
4. Site class.
5. Design spectral response acceleration parameters, S_{DS} and S_{D1} .
6. Seismic design category.
7. Basic seismic force-resisting system(s).
8. Design base shear(s).
9. Seismic response coefficient(s), C_S .
10. Response modification coefficient(s), R .
10. Analysis procedure used.

Exception: *Agritourism buildings* built prior to December 31, 2016.

SECTION 1604

GENERAL DESIGN REQUIREMENTS

1604.3 Serviceability. Structural systems and members thereof shall be designed to have adequate stiffness to limit deflections and lateral drift. See Section 12.12.1 of ASCE 7 for drift limits applicable to earthquake loading. The maximum story drift for wind loading shall be 0.008 times the story height, unless structural and architectural elements have been designed to account for larger displacements.

**SECTION 1607
LIVE LOADS**

**SECTION 1608
SNOW LOADS**

Table 1607.1, footnote “f”

f. The minimum concentrated load on stair treads shall be applied on an area of 2 inches by 2 inches. This load need not be assumed to act concurrently with the uniform load. Where bar grating and similar treads are permitted in Section 1011.7.1 of this code, the concentrated load shall be distributed as a linear load perpendicular to the span along the front 5 inches of tread.

1608.2 Ground snow loads. The ground snow loads to be used in determining the design snow loads for roofs shall be determined in accordance with Table 1608.2. Site-specific case studies shall be made in areas designated “CS” in Figure 1608.2. Ground snow loads for sites at elevations above the limits indicated by notes a and b of Table 1608.2 shall be approved. Ground snow load determination for such sites shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2-percent annual probability of being exceeded (50-year mean recurrence interval).

**TABLE 1608.2
GROUND SNOW LOADS, p_g , FOR KENTUCKY COUNTIES**

COUNTY	GROUND SNOW LOAD (PSF)	COUNTY	GROUND SNOW LOAD (PSF)	COUNTY	GROUND SNOW LOAD (PSF)	COUNTY	GROUND SNOW LOAD (PSF)
Adair	15	Edmonson	15	Knox	15	Nicholas	15
Allen	15	Elliott	15	Larue	15	Ohio	15
Anderson	15	Estill	15	Laurel	15	Oldham	15
Ballard	15	Fayette	15	Lawrence	15	Owen	20
Barren	15	Fleming	15	Lee	15	Owsley	15
Bath	15	Floyd	20	Leslie	20	Pendleton	20
Bell	15 ^b	Franklin	15	Letcher	20 ^a	Perry	20
Boone	20	Fulton	15	Lewis	20	Pike	20 ^a
Bourbon	15	Gallatin	20	Lincoln	15	Powell	15
Boyd	20	Garrard	15	Livingston	15	Pulaski	15
Boyle	15	Grant	20	Logan	15	Robertson	15
Bracken	20	Graves	15	Lyon	15	Rockcastle	15
Breathitt	15	Grayson	15	Madison	15	Rowan	15
Breckinridge	15	Green	15	Magoffin	15	Russell	15
Bullitt	15	Greenup	20	Marion	15	Scott	15
Butler	15	Hancock	15	Marshall	15	Shelby	15
Caldwell	15	Hardin	15	Martin	20	Simpson	15
Calloway	15	Harlan	20 ^a	Mason	20	Spencer	15
Campbell	20	Harrison	15	McCracken	15	Taylor	15
Carlisle	15	Hart	15	McCreary	15	Todd	15
Carroll	20	Henderson	15	McLean	15	Trigg	15
Carter	20	Henry	20	Meade	15	Trimble	20
Casey	15	Hickman	15	Menifee	15	Union	15
Christian	15	Hopkins	15	Mercer	15	Warren	15
Clark	15	Jackson	15	Metcalfe	15	Washington	15
Clay	15	Jefferson	15	Monroe	15	Wayne	15
Clinton	15	Jessamine	15	Montgomery	15	Webster	15
Crittenden	15	Johnson	15	Morgan	15	Whitley	15
Cumberland	15	Kenton	20	Muhlenberg	15	Wolfe	15
Daviess	15	Knott	20	Nelson	15	Woodford	15

For SI: 1 pound per square foot (psf) = 0.0479 kN/m².

a. Ground snow loads above 2500 feet (762m) in this county shall be based on site-specific case studies or by other approved means of approved rational analysis.

- b. Ground snow loads above 2000 feet (792.5m) in this county shall be based on site-specific case studies or by other approved means of approved rational analysis.

RISK CATEGORY	ULTIMATE DESIGN WIND SPEED mph (m/s)
I	105 (47)
II	115 (51)
III & IV	120 (54)

**SECTION 1609
WIND LOADS**

1609.1.1 Determination of wind loads. Wind loads on every *building* or *structure* shall be determined in accordance with Chapters 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The ultimate design wind speed, V_{ult} , and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered. Irregularly-shaped structures may be designed in accordance with Section 1609.6, subject to the limitations of that section, instead of using wind tunnel data. Alternatively, the *building official* may waive wind tunnel tests when design can be substantiated by dynamic or modal analysis.

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 *buildings*.
2. Subject to the limitations of Section 1609.1.1.1, residential *structures* using the provisions of AWC WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential *structures* using the provisions of AISI S230.
4. Designs using NAAMM FP 1001.
5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.
6. Wind tunnel tests in accordance with ASCE 49 and Sections 31.4 and 31.5 of ASCE 7.

The wind speeds in Table 1609.3 are ultimate design wind speeds, V_{ult} , and shall be converted in accordance with Section 1609.3.1 to nominal design wind speeds, V_{asd} , when the provisions of the standards referenced in Exceptions 4 and 5 are used.

1609.3 Ultimate design wind speed. The ultimate design wind speed, V_{ult} , in mph, for the determination of the wind loads shall be determined from Table 1609.3. When the ultimate design wind speed, V_{ult} , is estimated from regional climatic data, the ultimate design wind speed, V_{ult} , shall be determined in accordance with Section 26.5.3 of ASCE 7.

**TABLE 1609.3
ULTIMATE DESIGN WIND SPEEDS, V_{ult} , FOR
KENTUCKY**

1609.3.1 Wind speed conversion. When required, the ultimate design wind speeds of Figures 1609.3(1), 1609.3(2), and 1609.3(3) shall be converted to nominal design wind speeds, V_{asd} , using Table 1609.3.1 or Equation 16-33.

(Equation 16-33)

$$V_{asd} = V_{ult} \sqrt{0.6}$$

where:

V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1.

V_{ult} = ultimate design wind speeds determined from Table 1609.3.

**TABLE 1609.3.1
WIND SPEED CONVERSIONS^{a,b,c}**

V_{ult}	105 (47)	115 (51)	120 (54)
V_{asd}	81 (36)	89 (39)	93 (41)

- a. First value is in miles per hour (mph); second value is in meters per second (m/s).
- b. V_{ult} = ultimate design wind speeds determined from Table 1609.3.
- c. V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1.

1611.1 Design rain loads. Each portion of a roof shall be designed to sustain the load of rainwater that will accumulate on it if the primary drainage system for that portion is blocked plus the uniform load caused by water that rises above the inlet of the secondary drainage system at its design flow. The design rainfall shall be based on the 100-year hourly rainfall rate indicated Table 1611.1 or on other rainfall rates determined from *approved* local weather data.

(Equation 16-36)

$$R = 5.2(d_s + d_h)$$

For SI: $R = 0.0098(d_s + d_h)$

where:

d_h = Additional depth of water on the undeflected roof above the inlet of secondary drainage system at its design flow (i.e., the hydraulic head), in inches (mm).

d_s = Depth of water on the undeflected roof up to the inlet of secondary drainage system when the primary drainage system is blocked (i.e., the static head), in inches (mm).

R = Rain load on the undeflected roof, in psf (kN/m²). When the phrase “undeflected roof” is used, deflections from loads (including dead loads) shall not be considered when determining the amount of rain on the roof.

If secondary drainage systems contain drain lines, such lines and their point of discharge shall be separate from the primary drain lines.

TABLE 1611.1
100-YEAR, 1-HOUR DURATION RAINFALL INTENSITY, i

COUNTY	DESIGN RAINFALL INTENSITY (in)	COUNTY	DESIGN RAINFALL INTENSITY (in)	COUNTY	DESIGN RAINFALL INTENSITY (in)	COUNTY	DESIGN RAINFALL INTENSITY (in)
Adair	3.64	Edmonson	3.21	Knox	3.29	Nicholas	3.23
Allen	3.40	Elliott	3.21	Larue	3.10	Ohio	3.17
Anderson	3.15	Estill	3.20	Laurel	3.22	Oldham	3.18
Ballard	3.34	Fayette	3.14	Lawrence	3.07	Owen	3.23
Barren	3.38	Fleming	3.26	Lee	3.30	Owsley	3.30
Bath	3.26	Floyd	3.22	Leslie	3.27	Pendleton	3.21
Bell	3.38	Franklin	3.16	Letcher	3.19	Perry	3.26
Boone	3.03	Fulton	3.35	Lewis	3.18	Pike	3.11
Bourbon	3.21	Gallatin	3.11	Lincoln	3.14	Powell	3.22
Boyd	3.03	Garrard	3.10	Livingston	3.38	Pulaski	3.13
Boyle	3.14	Grant	3.22	Logan	3.30	Robertson	3.25
Bracken	3.23	Graves	3.37	Lyon	3.41	Rockcastle	3.18
Breathitt	3.33	Grayson	3.16	Madison	3.13	Rowan	3.24
Breckinridge	3.20	Green	3.23	Magoffin	3.29	Russell	3.31
Bullitt	3.16	Greenup	3.05	Marion	3.17	Scott	3.16
Butler	3.15	Hancock	3.19	Marshall	3.39	Shelby	3.18
Caldwell	3.39	Hardin	3.16	Martin	3.12	Simpson	3.30
Calloway	3.46	Harlan	3.30	Mason	3.27	Spencer	3.15
Campbell	3.08	Harrison	3.21	McCracken	3.35	Taylor	3.22
Carlisle	3.36	Hart	3.17	McCreary	3.33	Todd	3.32
Carroll	3.11	Henderson	3.30	McLean	3.17	Trigg	3.36
Carter	3.12	Henry	3.19	Meade	3.21	Trimble	3.17
Casey	3.19	Hickman	3.32	Menifee	3.33	Union	3.33
Christian	3.35	Hopkins	3.28	Mercer	3.14	Warren	3.29
Clark	3.18	Jackson	3.26	Metcalfe	3.32	Washington	3.16
Clay	3.25	Jefferson	3.12	Monroe	3.47	Wayne	3.34
Clinton	3.46	Jessamine	3.10	Montgomery	3.21	Webster	3.29
Crittenden	3.36	Johnson	3.21	Morgan	3.29	Whitley	3.32
Cumberland	3.41	Kenton	3.07	Muhlenberg	3.24	Wolfe	3.33
Daviess	3.19	Knott	3.23	Nelson	3.17	Woodford	3.15

For SI: 1 inch = 25.4 mm.

Source: NOAA Precipitation Frequency Data Server (Atlas 14, Volume 2, Version 3).

**SECTION 1611
RAIN LOADS**

1611.1.1 Flow rate of a single drainage system. Hydraulic head d_h shall be based on published drain manufacturer’s design data or other approved data as a function of flow rate through the cumulative effect of secondary drains for an impounded roof area. The flow rate for a single drainage system Q shall be:

(Equation 16-36a)

$$Q = 0.0104 A i$$

(in SI: $Q = 0.278 \times 10^{-6} A i$)

where:

A = Portion of roof drainage area served by a single drain, ft^2 (m^2).

i = Design rainfall intensity per Table 1611.1 or as otherwise allowed in this section, in (mm).

**SECTION 1613
EARTHQUAKE LOADS**

1613.3.1 Mapped acceleration parameters. The parameters S_S and S_I shall be determined from the 0.2 and 1-second spectral response accelerations shown in Table 1613.3.1. Documented electronic data values for S_S (0.2-second spectral acceleration, 2% probability of exceedance in 50 years) and S_I (1.0 second spectral acceleration, 2% probability of exceedance in 50 years) obtained through the 2008 US

**TABLE 1613.3.1
SEISMIC ACCELERATION PARAMETERS FOR KENTUCKY^a**

COUNTY	SPECTRAL RESPONSE ACCELERATION COEFFICIENTS				COUNTY	SPECTRAL RESPONSE ACCELERATION COEFFICIENTS			
	S_S^b	$S_{S,o}^c$	S_I^b	$S_{I,o}^c$		S_S^b	$S_{S,o}^c$	S_I^b	$S_{I,o}^c$
Adair	0.201	0.186	0.110	0.101	Franklin	0.179	0.172	0.094	0.090
Allen	0.272	0.228	0.135	0.120	Fulton	2.904	1.172	1.153	0.400
Anderson	0.182	0.178	0.098	0.093	Gallatin	0.161	0.153	0.087	0.083
Ballard	2.591	1.614	1.006	0.558	Garrard	0.188	0.181	0.095	0.093
Barren	0.249	0.214	0.127	0.115	Grant	0.173	0.156	0.087	0.082
Bath	0.205	0.195	0.088	0.085	Graves	1.552	0.918	0.536	0.311
Bell	0.325	0.258	0.110	0.100	Grayson	0.332	0.238	0.147	0.122
Boone	0.156	0.144	0.084	0.079	Green	0.209	0.193	0.113	0.106
Bourbon	0.204	0.187	0.090	0.087	Greenup	0.167	0.146	0.077	0.072
Boyd	0.162	0.151	0.076	0.073	Hancock	0.402	0.326	0.160	0.142
Boyle	0.182	0.180	0.099	0.095	Hardin	0.267	0.207	0.129	0.109
Bracken	0.181	0.160	0.084	0.079	Harlan	0.312	0.240	0.107	0.095
Breathitt	0.209	0.188	0.092	0.085	Harrison	0.192	0.173	0.089	0.084
Breckenridge	0.333	0.252	0.145	0.123	Hart	0.253	0.207	0.129	0.109
Bullitt	0.226	0.190	0.114	0.101	Henderson	0.676	0.486	0.230	0.182
Butler	0.378	0.282	0.163	0.136	Henry	0.178	0.165	0.096	0.090
Caldwell	0.789	0.614	0.273	0.228	Hickman	2.048	1.139	0.737	0.388
Calloway	0.985	0.712	0.334	0.254	Hopkins	0.679	0.484	0.241	0.190
Campbell	0.158	0.144	0.081	0.078	Jackson	0.210	0.192	0.095	0.091
Carlisle	2.288	1.325	0.834	0.456	Jefferson	0.227	0.186	0.114	0.099
Carroll	0.168	0.158	0.092	0.087	Jessamine	0.188	0.181	0.094	0.092
Carter	0.184	0.158	0.082	0.075	Johnson	0.181	0.170	0.083	0.079
Casey	0.189	0.181	0.102	0.097	Kenton	0.157	0.145	0.083	0.078
Christian	0.623	0.451	0.230	0.187	Knott	0.220	0.192	0.091	0.086
Clark	0.203	0.192	0.091	0.089	Knox	0.292	0.232	0.107	0.098
Clay	0.260	0.206	0.100	0.092	Larue	0.224	0.196	0.117	0.107
Clinton	0.206	0.196	0.108	0.104	Laurel	0.238	0.199	0.100	0.094
Crittenden	0.896	0.666	0.340	0.238	Lawrence	0.175	0.157	0.081	0.075
Cumberland	0.207	0.195	0.112	0.106	Lee	0.200	0.197	0.091	0.088
Daviess	0.522	0.365	0.194	0.153	Leslie	0.269	0.210	0.101	0.091
Edmonson	0.294	0.240	0.138	0.123	Letcher	0.252	0.211	0.097	0.089
Elliott	0.185	0.168	0.083	0.078	Lewis	0.189	0.152	0.082	0.073
Estill	0.200	0.194	0.092	0.089	Lincoln	0.188	0.181	0.098	0.094
Fayette	0.196	0.183	0.092	0.089	Livingston	1.190	0.845	0.408	0.290
Fleming	0.202	0.184	0.086	0.081	Logan	0.402	0.307	0.171	0.145
Floyd	0.210	0.177	0.088	0.081	Lyon	0.872	0.695	0.298	0.249

TABLE 1613.3.1 (Continued)
SEISMIC ACCELERATION PARAMETERS FOR KENTUCKY^a

Madison	0.198	0.185	0.094	0.091	Perry	0.245	0.200	0.096	0.088
Magoffin	0.193	0.178	0.086	0.082	Pike	0.225	0.180	0.096	0.088
Marion	0.197	0.181	0.107	0.099	Powell	0.203	0.199	0.090	0.080
Marshall	1.078	0.789	0.369	0.274	Pulaski	0.214	0.187	0.101	0.096
Martin	0.183	0.166	0.082	0.078	Robertson	0.192	0.179	0.085	0.082
Mason	0.192	0.168	0.084	0.079	Rockcastle	0.203	0.187	0.097	0.093
McCracken	2.124	1.068	0.759	0.366	Rowan	0.200	0.180	0.086	0.081
McCreary	0.269	0.209	0.107	0.100	Russell	0.196	0.187	0.106	0.101
McLean	0.550	0.418	0.203	0.169	Scott	0.190	0.173	0.091	0.087
Meade	0.292	0.232	0.132	0.116	Shelby	0.188	0.174	0.100	0.092
Menifee	0.204	0.194	0.088	0.085	Simpson	0.322	0.272	0.151	0.135
Mercer	0.182	0.179	0.098	0.094	Spencer	0.195	0.180	0.103	0.096
Metcalfe	0.215	0.200	0.115	0.109	Taylor	0.202	0.184	0.109	0.100
Monroe	0.230	0.204	0.121	0.110	Todd	0.459	0.380	0.187	0.168
Montgomery	0.205	0.202	0.090	0.088	Trigg	0.817	0.582	0.282	0.222
Morgan	0.196	0.175	0.086	0.081	Trimble	0.177	0.166	0.096	0.091
Muhlenberg	0.508	0.368	0.197	0.161	Union	0.768	0.634	0.261	0.223
Nelson	0.211	0.182	0.110	0.098	Warren	0.320	0.245	0.148	0.125
Nicholas	0.204	0.189	0.088	0.085	Washington	0.191	0.180	0.104	0.097
Ohio	0.437	0.317	0.177	0.142	Wayne	0.215	0.193	0.105	0.100
Oldham	0.194	0.175	0.102	0.094	Webster	0.708	0.515	0.248	0.194
Owen	0.175	0.158	0.090	0.085	Whitley	0.305	0.220	0.109	0.100
Owsley	0.216	0.198	0.093	0.099	Wolfe	0.199	0.189	0.089	0.086
Pendleton	0.177	0.156	0.086	0.080	Woodford	0.183	0.178	0.094	0.091

- The long-period transition period, T_L , used in ASCE 7 shall be 12 seconds for all Kentucky counties.
- Listed values of spectral response coefficients, S_S and S_I , shall be used in accordance to Section 1613.3.1 of this code.
- Listed values of minimum spectral response coefficients, $S_{S,0}$ and $S_{I,0}$, are the minimum bounds that would apply to an approved means of rational analysis in accordance to the limitations in Section 1613.3.1 of this code. In the absence of substantiating data derived by geodetic analysis, the maximum values of S_S and S_I shall be used for that county.

Geological Survey National Seismic Mapping Project database and adjusted for the 2015 International Building Code, or other means of *approved rational analysis* may be used instead of Table 1613.3.1. In no case will the calculated values be less than $S_{S,0}$ for S_S , or $S_{I,0}$ for S_I in that county.

1613.3.3 Site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters. The maximum considered earthquake spectral response acceleration for short periods, S_{MS} , and at 1-second period, S_{MI} , adjusted for site class effects shall be determined by Equations 16-37 and 16-38, respectively:

$$S_{MS} = F_a S_S \quad \text{(Equation 16-37)}$$

$$S_{MI} = F_v S_I \quad \text{(Equation 16-38)}$$

where:

F_a = Site coefficient defined in Table 1613.3.3(1).

F_v = Site coefficient defined in Table 1613.3.3(2).

S_S = The mapped spectral accelerations for short periods as determined in Section 1613.3.1.

S_I = The mapped spectral accelerations for a 1-second period as determined in Section 1613.3.1.

For regular *structures* as defined by ASCE 7, and irregular *structures* as defined by ASCE 7 and assigned to Risk Categories I and II; five stories or less above the base and with a period, T , of 0.5 seconds or less, S_S is not required to exceed 1.5.

1613.3.5 Determination of seismic design category. *Structures* classified as Risk Category III that are located where the mapped spectral response acceleration parameter at 1-second period, S_I , is greater than or equal to 0.75 shall be assigned to Seismic Design Category E. *Structures* classified as Risk Category IV that are located where the mapped spectral response acceleration parameter at 1-second period, S_I , is greater than or equal to 0.75 shall be assigned to Seismic Design Category F. All other *structures* shall be assigned to a seismic design category based on their risk category and the design spectral response acceleration parameters, S_{DS} and S_{DI} , determined in accordance with Section 1613.3.4 or the site-specific procedures of ASCE 7. Each *building* and *structure* shall be assigned to the more severe seismic design category

in accordance with Table 1613.3.5(1) or 1613.3.5(2), irrespective of the fundamental period of vibration of the structure, T .

1613.3.5.1 Alternative seismic design category determination. The seismic design category is permitted to be determined from Table 1613.3.5(1) alone when all of the following apply:

1. In each of the two orthogonal directions, the approximate fundamental period of the structure, T_a , in each of the two orthogonal directions determined in accordance with Section 12.8.2.1 of ASCE 7, is less than $0.8 T_S$ determined in accordance with Section 11.4.5 of ASCE 7.

2. In each of the two orthogonal directions, the fundamental period of the structure used to calculate the story drift is less than T_S .
3. Equation 12.8-2 of ASCE 7 is used to determine the seismic response coefficient, C_s .
4. The diaphragms are rigid or are permitted to be idealized as rigid in accordance with Section 12.3.1 of ASCE 7 or, for diaphragms permitted to be idealized as flexible in accordance with Section 12.3.1 of ASCE 7, the distances between vertical elements of the seismic force-resisting system do not exceed 40 feet (12 192 mm).

**TABLE 1614.1
ATMOSPHERIC ICE LOAD PARAMETERS FOR KENTUCKY**

COUNTY	NOMINAL ICE THICKNESS t (in) ^a	CONCURRENT WIND SPEED V_c (mph) ^b	COUNTY	NOMINAL ICE THICKNESS t (in) ^a	CONCURRENT WIND SPEED V_c (mph) ^b
Adair	0.75	30	Franklin	0.75	30
Allen	0.75	30	Fulton	1.00	30
Anderson	0.75	30	Gallatin	0.75	30
Ballard	1.00	30	Garrard	0.75	30
Barren	0.75	30	Grant	0.75	30
Bath	0.75	30	Graves	1.00	30
Bell	0.50 ^c	30	Grayson	0.75	30
Boone	0.75	40	Green	0.75	30
Bourbon	0.75	30	Greenup	0.75	30
Boyd	0.75	30	Hancock	0.75	30
Boyle	0.75	30	Hardin	0.75	30
Bracken	0.75	30	Harlan	0.50 ^c	30
Breathitt	0.75	30	Harrison	0.75	30
Breckenridge	0.75	30	Hart	0.75	30
Bullitt	0.75	30	Henderson	0.75	30
Butler	0.75	30	Henry	0.75	30
Caldwell	0.75	30	Hickman	1.00	30
Calloway	1.00	30	Hopkins	0.75	30
Campbell	0.75	40	Jackson	0.75	30
Carlisle	1.00	30	Jefferson	0.75	30
Carroll	0.75	30	Jessamine	0.75	30
Carter	0.75	30	Johnson	0.75	30
Casey	0.75	30	Kenton	0.75	40
Christian	0.75	30	Knott	0.50 ^c	30
Clark	0.75	30	Knox	0.75	30
Clay	0.75	30	Larue	0.75	30
Clinton	0.75	30	Laurel	0.75	30
Crittenden	1.00	30	Lawrence	0.75	30
Cumberland	0.75	30	Lee	0.75	30
Daviess	0.75	30	Leslie	0.50 ^c	30
Edmonson	0.75	30	Letcher	0.50 ^c	30
Elliott	0.75	30	Lewis	0.75	30
Estill	0.75	30	Lincoln	0.75	30
Fayette	0.75	30	Livingston	1.00	30
Fleming	0.75	30	Logan	0.75	30
Floyd	0.50 ^c	30	Lyon	1.00	30

TABLE 1614.1 (Continued)
ATMOSPHERIC ICE LOAD PARAMETERS FOR KENTUCKY

COUNTY	NOMINAL ICE THICKNESS t (in) ^a	CONCURRENT WIND SPEED V_c (mph) ^b	COUNTY	NOMINAL ICE THICKNESS t (in) ^a	CONCURRENT WIND SPEED V_c (mph) ^b
Madison	0.75	30	Perry	0.50 ^c	30
Magoffin	0.75	30	Pike	0.75 ^c	30
Marion	0.75	30	Powell	0.75	30
Marshall	1.00	30	Pulaski	0.75	30
Martin	0.50 ^c	30	Robertson	0.75	30
Mason	0.75	30	Rockcastle	0.75	30
McCracken	1.00	30	Rowan	0.75	30
McCreary	0.75	30	Russell	0.75	30
McLean	0.75	30	Scott	0.75	30
Meade	0.75	30	Shelby	0.75	30
Menifee	0.75	30	Simpson	0.75	30
Mercer	0.75	30	Spencer	0.75	30
Metcalf	0.75	30	Taylor	0.75	30
Monroe	0.75	30	Todd	0.75	30
Montgomery	0.75	30	Trigg	0.75	30
Morgan	0.75	30	Trimble	0.75	30
Muhlenberg	0.75	30	Union	1.00	30
Nelson	0.75	30	Warren	0.75	30
Nicholas	0.75	30	Washington	0.75	30
Ohio	0.75	30	Wayne	0.75	30
Oldham	0.75	30	Webster	0.75	30
Owen	0.75	30	Whitley	0.75	30
Owsley	0.75	30	Wolfe	0.75	30
Pendleton	0.75	30	Woodford	0.75	30

For SI: 1-inch = 25.4 mm; 1 mile per hour (MPH) = 0.444 meters per second (m/s).

- Listed values of nominal ice thickness, t , shall be used in accordance to Section 1614 of this code. Ice loads shall be evaluated separately from snow load.
- Listed values of concurrent wind speed, V_c , shall be used in accordance to Section 1614 of this code. Concurrent wind speeds shall be used only in conjunction with ice loads. For other wind load conditions, Section 1609.3 of this code shall apply.
- Nominal ice thicknesses in mountainous regions may vary significantly. Ice thicknesses shall be verified with local meteorological data for ice loads.

SECTION 1614
ATMOSPHERIC ICE LOADS

1614.1 General. Ice-sensitive structures shall be designed for atmospheric ice loads in accordance with Chapter 10 of ASCE 7. The values for nominal ice thickness, t , and concurrent wind speed V_c , shall be taken from Table 1614.1.

1614.1.1 Load Combinations. Load combinations that include ice loads shall be in accordance to Sections 2.3.4 or 2.4.3 of ASCE 7. Section 1605.3.2 may not be used for combinations that include ice loads.

CHAPTER 17
SPECIAL INSPECTIONS AND TESTS

SECTION 1702
DEFINITIONS

1702.1 Definitions. The following terms are defined in Chapter 2:

APPROVED AGENCY.
APPROVED FABRICATOR.
CERTIFICATE OF COMPLIANCE.
DESIGNATED SEISMIC SYSTEM.
FABRICATED ITEM.
INTUMESCENT FIRE-RESISTANT COATINGS.
MAIN WINDFORCE-RESISTING SYSTEM.
MASTIC FIRE-RESISTANT COATINGS.
QUALIFIED CERTIFICATION AUTHORITY.
SEISMIC FORCE RESISTING SYSTEM.
SPECIAL INSPECTION.
 Continuous special inspection.
 Periodic special inspection.
SPECIAL INSPECTOR.
SPRAYED FIRE-RESISTANT MATERIALS.
STRUCTURAL OBSERVATION.

SECTION 1704
SPECIAL INSPECTIONS AND TESTS,
CONTRACTOR RESPONSIBILITY AND
STRUCTURAL OBSERVATION

1704.2 Special inspections and tests. Special inspections are required for all *buildings* and *structures* that require the services of a *registered design professional* per Section 107, Section 122, and Table 122.1. Where application is made to the *building official* for construction as specified in Section 105, the owner or the owner's authorized agent, other than the contractor, shall employ one or more approved agencies to provide special inspections and tests during construction on the types of work specified in Section 1705 and identify the approved agencies to the *building official*. These special inspections and tests are in addition to the inspections by the *building official* that are identified in Section 110.

Exceptions:

1. Special inspections and tests are not required for construction of a minor nature or as warranted by conditions in the jurisdiction as approved by the *building official*. Special inspections are not required for work for which a design professional is not required by Section 107, Section 122, and Table 122.1.
2. Unless otherwise required by the *building official*, special inspections and tests are not required for occupancies in Group R-3 as applicable in Section 101.2 and Group U occupancies that are accessory

to a residential occupancy including, but not limited to, those listed in Section 312.1.

3. Special inspections and tests are not required for portions of *structures* designed and constructed in accordance with the cold-formed steel light-frame construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308. Special inspections are not required for *building* components not covered in this chapter unless the design of the components involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects
4. Unless otherwise required by the *building official*, special inspections are not required for *buildings* assigned to Risk Category I per Table 1604.5.

1704.2.3 Statement of special inspections. At the time of application for the *permit*, the *permit* applicant shall submit a statement of *special inspections* prepared by the *registered design professional in responsible charge* in accordance with Section 107.1 as a condition for *permit* issuance. This statement shall be in accordance with Section 1704.3 and shall be included on the drawings submitted for *permit*.

1704.2.3 Statement of special inspections. Section 1704.2.3, Exception of the 2015 IBC shall be DELETED in its entirety.

1704.2.4 Report requirement. *Approved agencies* shall keep records of special inspections and tests. The *approved agency* shall submit reports of special inspections and tests to the *registered design professional in responsible charge*. Reports shall indicate that work inspected or tested was or was not completed in conformance to *approved construction documents*. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the *registered design professional in responsible charge* prior to the completion of that phase of the work. Discrepancies that are not corrected may be grounds for denial of the certificate of occupancy. A final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests, shall be submitted by the *registered design professional in responsible charge*, to the *building official*, prior to issuance of a certificate of occupancy by the *building official*. This final report shall not be considered a certification by the *registered design professional in responsible charge* for any special inspections, tests, or

structural observations performed by others not under the direct supervision of the *registered design professional in responsible charge*.

1704.2.5.1 Fabricator approval. *Special inspections* during fabrication are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by a qualified certification authority. At completion of fabrication, the *approved* fabricator shall submit a certificate of compliance to the *registered design professional in responsible charge* for submittal to the *building official* as specified in Section 1704.5, stating that the work was performed in accordance with the *approved construction documents*.

1704.3 Statement of special inspections. Where *special inspections* or tests are required by Section 1705, the *registered design professional in responsible charge* shall prepare a statement of special inspections in accordance with Section 1704.3.1 for submittal by the applicant in accordance with Section 1704.2.3. The statement of special inspections shall be included on the contract documents submitted for *permit*. Refer to the SEAoK *Special Inspections Guidelines* document, referenced in Chapter 35, for sample forms and statements.

1704.3 Exception. Section 1704.3, Exception of the 2015 IBC shall be DELETED in its entirety.

1704.4 Contractor responsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system, or a wind- or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the *registered design professional in responsible charge* acting as the owner's authorized agent prior to the commencement of work on the system or component. The contractor's statement of responsibility shall include all of the following:

1. Acknowledgement of awareness of the special requirements contained in the statement of special inspections;
2. Acknowledgement that control will be exercised to obtain conformance with the *construction documents* approved by the *building official*;
3. Procedures for exercising control within the contractor's organization, the method and frequency of reporting, and the distribution of the reports; and

4. Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.

1704.5 Submittals to the building official. Section 1704.5 of the 2015 IBC shall be DELETED in its entirety.

1704.6 Structural observations. Where required by the provisions of Section 1704.6.1 or 1704.6.2, the owner or the owner's authorized agent shall employ a *registered design professional* to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other sections of this code.

Prior to the commencement of observations, the structural observer shall submit to the *registered design professional in responsible charge* a written statement identifying the frequency and extent of structural observations.

At the conclusion of the work included in the *permit*, the structural observer shall submit to the *registered design professional in responsible charge* a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

1704.6.1 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design Category D, E, or F where one or more of the following conditions exist:

1. The structure is classified as Risk Category III or IV.
2. The height of the structure is greater than 50 feet (22 860 mm) above the base.
3. The structure is classified as Risk Category I or II, and is greater than two stories above *grade plane*.
4. When so designated by the *registered design professional* responsible for the structural design.
5. When such observation is specifically required by the *building official* or *registered design professional* responsible for the structural design.

SECTION 1705 REQUIRED SPECIAL INSPECTIONS AND TESTS

1705.1.1 Special cases. *Special inspections* and tests shall be required for proposed work that is, in the opinion of the *registered design professional in responsible charge*, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.

2. Unusual design applications of materials described in this code.
3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code.

1705.1.2 Special inspections for seismic resistance. *Special inspections* for seismic resistance shall be in accordance with Section 1705.12.

1705.2 Steel construction. The *special inspections* and nondestructive testing of steel construction in *buildings, structures*, and portions thereof shall be in accordance with this section. Structural steel shall be as defined in AISC 360.

Exception: *Special inspections* of the steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting, or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the material specification and grade for the main stress-carrying elements are capable of being determined. Mill test reports shall be identifiable to the main stress-carrying elements when required by the *approved construction documents*.

1705.3 Concrete construction. *Special inspections* and tests of concrete construction shall be performed in accordance with this section and Table 1705.3 for all *buildings and structures* designated to Seismic Design Category C, D, E, or F and for any *building or structure*, of any size, assigned to Risk Category III or IV per Table 1604.5.

Exception: *Special inspections* and tests shall not be required for the following when designated to Seismic Design Category A or B:

1. Isolated spread concrete footings of *buildings* three stories or less above *grade plane* that are fully supported on earth or rock.
2. Continuous concrete footings supporting walls of *buildings* three stories or less above *grade plane* that are fully supported on earth or rock where:
 - 2.1. The footings support walls of light-frame construction.
 - 2.2. The footings are designed in accordance with Table 1809.7.
3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where

the effective prestress in the concrete is less than 150 psi (1.03 MPa).

4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.
5. Concrete patios, driveways and sidewalks, on grade.

1705.3.2 Material tests. In the absence of sufficient data or documentation providing evidence of conformance to quality standards for materials in Chapters 19 and 20 of ACI 318, the *registered design professional* shall require testing of materials in accordance with the appropriate standards and criteria for the material in Chapters 19 and 20 of ACI 318.

1705.5.1 High-load diaphragms and shear walls. High-load *diaphragms* and *shear walls* designed in accordance with Section 2306.2 and Section 2306.3 respectively shall be installed with *special inspections* as indicated in Section 1704.2. The special inspector shall inspect the wood structural panel sheathing to ascertain whether it is of the grade and thickness shown on the *approved construction documents*. Additionally, the special inspector must verify the nominal size of framing members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines, the number, size, and fastening of hold-downs, and that the spacing between fasteners in each line and at edge margins agrees with the *approved construction documents*.

1705.11.1 Structural wood. *Continuous special inspection* is required during field gluing operations of elements of the main windforce-resisting system. *Periodic special inspection* is required for nailing, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.

1705.11.1 Structural Wood. Section 1705.11.1, Exception of the 2015 IBC shall be DELETED in its entirety.

1705.11.2 Cold-formed steel light-frame construction. *Periodic special inspection* is required for welding operations of elements of the main windforce-resisting system. *Periodic special inspection* is required for screw attachment, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs.

1705.11.2 Cold-formed steel light-frame. 1705.11.2, Exception of the 2015 IBC shall be DELETED in its entirety.

CHAPTER 18 SOILS AND FOUNDATIONS

SECTION 1801 GENERAL

1801.1.1 Certificate of compliance. Design compliance with the provisions of this chapter and Chapter 16 shall be satisfied when certification of an architect or engineer licensed in Kentucky to that affect is placed on the drawings submitted to the *building official*, unless the *building official* notifies the registered design professional that a specific code violation exists.

SECTION 1803 GEOTECHNICAL INVESTIGATIONS

1803.2 Investigations Required. Geotechnical investigations shall be conducted [~~for other than construction of a minor nature,~~] where a *registered design professional* seal is required per Table 122.1 or for special cases where site soil conditions are determined to be substandard by the *building official*. Investigations where required shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exception: The *building official* shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.10 and 1803.5.11.

1803.5 Investigated conditions. Geotechnical investigations shall be conducted as indicated in Sections 1803.5.1 through 1803.5.13.

1803.5.13 Karst Hazards. Risk Category III and IV *buildings* and *structures*, as defined in Table 1604.5 and located in regions within or near areas designated as being underlain by bedrock with high potential for karst development on Kentucky Geological Survey Map and Chart 33, Series XII, 2001, Karst Occurrence in Kentucky, shall have geophysical or other approved testing performed by a qualified *registered design professional* to determine if sinkhole or weak cavern conditions exist under the *building* or *structure*. The geophysical report shall include measures to mitigate any karst hazards found. The Karst Occurrence in Kentucky Map may be viewed at www.uky.edu/kgs.

The following counties in Kentucky include areas where karst potential are known to exist: Adair, Allen, Anderson, Bath, Barren, Bell, Boyle, Bourbon, Bracken, Breckinridge, Bullitt, Caldwell, Calloway, Carter, Casey, Christian, Clark, Clinton, Crittenden, Cumberland, Edmonson, Elliott, Estill, Fayette, Fleming, Franklin, Garrard, Grant, Grayson, Green, Greenup, Hardin, Harlan,

Harrison, Hart, Henry, Jackson, Jefferson, Jessamine, Larue, Lewis, Lincoln, Livingston, Logan, Lee, Letcher, Lyon, Madison, Marshall, Meade, Mercer, Menifee, Metcalfe, Monroe, Nelson, Nicholas, Oldham, Owen, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Scott, Simpson, Taylor, Todd, Trigg, Trimble, Warren, Washington, Wayne, Whitley, Woodford, and Wolfe.

Exceptions:

1. Construction sites where it can be demonstrated by published geologic mapping that the upper 100 feet of strata for a site does not include any limestone, dolomite, or other predominantly calcareous rock exceeding 5 feet in thickness. Geologic maps and digital mapping can be obtained from the Kentucky Geologic Survey.
2. Risk Category IV *buildings* or *structures*, not similar in occupancy to Risk Category III, under 5,000 square feet in building area, and not providing any residential facilities within the structure.
3. Risk Category IV facilities not normally occupied.

SECTION 1807 FOUNDATION WALLS, RETAINING WALLS AND EMBEDDED POSTS AND POLES

1807.2 Retaining walls. Retaining walls shall be designed in accordance with Sections 1807.2.1 through 1807.2.4.

1807.2.1 General. Retaining walls shall be designed to ensure stability against overturning, sliding, excessive foundation pressure, and water uplift. Where a keyway is extended below the wall base with the intent to engage passive pressure and enhance sliding stability, lateral soil pressures on both sides of the keyway shall be considered in the sliding analysis.

1807.2.2 Design lateral soil loads. Retaining walls shall be designed for the lateral soil loads set forth in Section 1610.

1807.2.3 Safety factor. Retaining walls shall be designed to resist the lateral action of soil to produce sliding and overturning with a minimum safety factor of 1.5 in each case. The load combinations of Section 1605 shall not apply to this requirement. Instead, design shall be based on 0.7 times nominal earthquake loads, 1.0 times other *nominal loads*, and investigation with one or more of the variable loads set to zero. The safety factor against lateral sliding shall be taken as the available soil resistance at the base of the retaining wall foundation divided by the net lateral force applied to the retaining wall.

Exception: Where earthquake loads are included, the minimum safety factor for retaining wall sliding and overturning shall be 1.1.

- 2. Constructing in accordance with ASCE 32; or
- 3. Erecting on solid rock.

1807.2.4 Guards. Where retaining walls with differences in grade level on each side of the wall in excess of 4 feet are located closer than 2 feet (610 mm) to a walk, parking lot, or driveway on the high side, such retaining walls shall be provided with guards that are constructed in accordance with Section 1015.

**SECTION 1809
SHALLOW FOUNDATIONS**

1809.4 Depth of footings. The minimum depth of the bottom of footings below the undisturbed ground surface shall be 24 inches (610 mm). Where applicable, the requirements of Section 1809.5 shall also be satisfied. The minimum width of footings shall be 12 inches (305 mm).

1809.5 Frost protection. Except where otherwise protected from frost, foundation walls, piers, and other permanent supports of *buildings* and *structures* shall be protected by one or more of the following methods:

- 1. Extending the bottom of footings below the frost line as identified in Table 1809.5;

**TABLE 1809.5
MINIMUM FROST PROTECTION DEPTH FOR KENTUCKY**

COUNTY	FROST DEPTH <i>d_f</i> (in)	COUNTY	FROST DEPTH <i>d_f</i> (in)	COUNTY	FROST DEPTH <i>d_f</i> (in)
Bell	27	Johnson	30	Magoffin	30
Boone	30	Kenton	30	Martin	33
Breathitt	30	Knott	33	Owsley	27
Campbell	30	Knox	27	Perry	30
Clay	27	Lawrence	27	Pike	33
Floyd	33	Leslie	30	<i>All other KY counties</i>	24
Harlan	30	Letcher	33		

**CHAPTER 21
MASONRY**

**SECTION 2113
MASONRY CHIMNEYS**

2113.11.1.2 Gas appliances. Flue lining systems for gas appliances shall be in accordance with the NFPA 54, National Fuel Gas Code.

2113.15 Flue area (appliance). Chimney flues shall not be smaller in area than the area of the connector from the appliance. Chimney flues connected to more than one appliance shall be not less than the area of the largest connector plus 50 percent of the areas of additional chimney connectors.

Exceptions:

1. Chimney flues serving oil-fired appliances sized in accordance with NFPA 31.
2. Chimney flues serving gas-fired appliances sized in accordance with the NFPA 54.

CHAPTER 22 STEEL

SECTION 2209 STEEL STORAGE RACKS

2209.1 Storage racks. The design, testing, and utilization of storage racks made of cold-formed or hot-rolled steel structural members shall be in accordance with RMI/ANSI MH 16.1. Where required by ASCE 7, the seismic design of storage racks shall be in accordance with Section 15.5.3 of ASCE 7, except that the mapped acceleration parameters, S_s and S_1 , shall be determined in accordance with Section 1613.3.1. In locations where the steel storage racks are in public areas, the provisions of FEMA 460, Seismic Considerations for Steel Storage Racks Located in Areas Accessible to the Public.

CHAPTER 27 ELECTRICAL

SECTION 2701 SCOPE

2701.1 Scope. This chapter governs the electrical components, equipment, and systems used in *buildings* and *structures* covered by this code. Electrical components, equipment, and systems shall be designed and constructed in accordance with the provisions of NFPA 70.

2701.2 Electrical inspections. Inspections conducted to determine compliance with National Electrical Code NFPA 70, shall be conducted by certified inspectors in accordance with KRS Chapter 227 and 815 KAR 35:015.

2701.3 Electrical machinery. Electrical machinery shall comply with NFPA 79.

SECTION 2702 EMERGENCY AND STANDBY POWER SYSTEMS

[F] **2702.1.2 Electrical.** Emergency power systems and standby power systems required by this code or the International Fire Code shall be installed in accordance with NFPA 70, NFPA 110, and NFPA 111.

2702.4 Maintenance. Emergency and standby power systems shall be maintained and tested in accordance with the 815 KAR 10:060, Kentucky Standards of Safety.

SECTION 2703 PERMIT AND CERTIFICATE OF INSPECTION

2703.1 General. Electrical wiring or equipment shall not be installed within or on any *building*, *structure*, or premises, nor shall any alteration be made in any such existing installation, without first securing approval and a *permit* from the *building official* except as provided for in Section 2703.2. It shall be unlawful to use or allow the use of, or to supply current for, an electrical system in a *building* or *structure*, unless the required certificate of inspection and *permit* have been issued by the *building official*.

2703.2 Exemptions. A *permit* shall not be required for the execution and use of the classes of work specified in Sections 2703.2.1 through 2703.2.4.

2703.2.1 Repairs and maintenance. A *permit* shall not be required for minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

2703.2.2 Public service agencies. A *permit* shall not be required for the installation, alteration, or repair of electrical equipment for the operation of communications and signals or the transmission of intelligence by wire by public service agencies, except as provided in Chapter 9 for fire alarm systems.

2703.2.3 Power companies. A *permit* shall not be required for the installation, alteration, or repair of electrical equipment of a power or public service company for its use in the generation, transmission, distribution, or metering of electricity.

2703.2.4 Temporary testing systems. A *permit* shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

SECTION 2704 INSPECTIONS AND TESTS

2704.1 During installation. During the installation of electric systems and equipment, the certified electrical inspector shall make inspections to insure compliance with the provisions of this chapter, except as provided for in Section 2703.

2704.2 Concealing work. Work in connection with an electric system shall not be covered or concealed until such work has been inspected and permission to conceal such work has been approved.

2704.3 Final inspection and test. On completion of the work, the certified electrical inspector shall inspect the work and cause tests to be made of the operation of the entire system to insure compliance with all requirements.

**CHAPTER 28
MECHANICAL SYSTEMS**

**SECTION 2801
SCOPE**

[M] 2801.1 Scope. Mechanical appliances, equipment, and systems shall be constructed, installed, and maintained in accordance with the *International Mechanical Code* and the NFPA 54 National Fuel Gas Code, except as modified in Sections 2801.1.1. *Masonry chimneys, fireplaces, and barbecues* shall comply with the *International Mechanical Code* and Chapter 21 of this code.

Exception: Mechanical ventilating systems may be designed in accordance with the provisions of ASHRAE 62 listed in Chapter 35.

2801.1.1 Amendments. The 2015 *International Mechanical Code (IMC)* is amended in accordance with Sections 2801.1.1.2 through 2801.1.1.8. The following section references shown in parentheses are from the *IMC*. These amendments supersede the *IMC* provisions.

2801.1.1.2 (306.1 IMC) Access. *Appliances* and any serviceable HVAC system components that utilize energy shall be accessible for inspection, service, repair, and replacement without disabling the function of a fire-resistance-rated assembly or removing permanent construction, other appliances, venting systems, or any other piping or ducts not connected to the *appliance* being inspected, serviced, repaired, or replaced. A level working space not less than 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in

front of the control side to service an *appliance* or service access shall be provide in accordance with the manufacturer’s recommendations.

2801.1.1.3 (307.3 IMC) Condensate pumps. Condensate pumps located in inconspicuous spaces, such as attics and crawl spaces, shall be connected to the *appliance* or equipment served such that when the pump fails, the *appliance* or equipment will be prevented from operating or an alarm notifies the occupant of failure. Pumps shall be installed in accordance with the manufacturers’ instructions.

2801.1.1.4 (504.5.1 IMC) Accessibility identification. Dryer exhaust duct power ventilators shall be accessible for inspection, service, repair, and replacement without removing permanent construction. Dryer exhaust duct power ventilators shall be identified using a permanent label or tag at the *appliance* or access door to the *appliance*. A permanent label or tag giving notification to the occupant of the use of a dryer exhaust duct power ventilator shall be located within 6 feet (1829 mm) of the dryer.

2801.1.1.5 Discrete plumbing and mechanical products in plenums. Section 602.2.1.5 of the 2015 *IMC* shall be DELETED in its entirety.

2801.1.1.6 Metallic Ducts. Table 603.4 of the 2015 *IMC* shall be DELETED and replaced with Table 603.4 from the 2012 *IMC*, hereafter referred to as Table 2801.1.1.6.

**TABLE 2081.1.1.6
DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESS FOR
SINGLE DWELLING UNITS**

DUCT SIZE	GALVANIZED		ALUMINUM MINIMUM THICKNESS (in.)
	Minimum thickness (in.)	Equivalent galvanized gage no.	
Round ducts and enclosed rectangular ducts	0.0157	28	0.0175
14 inches or less	0.0187	26	0.018
16 and 18 inches	0.0236	24	0.023
20 inches and over			
Exposed rectangular ducts			
14 inches or less	0.0157	28	0.0175
Over 14 inches ^a	0.0187	26	0.018

For SI: 1 inch = 25.4 mm, 1 inch water gage = 249 Pa.

a. For duct gages and reinforcement requirements at static pressures of 1/2-inch, 1-inch, and 2-inch w.g., *SMACNA HVAC Duct Construction Standards*, Tables 2-1, 2-2, and 2-3, shall apply.

2801.1.1.7 (603.9 IMC) Joints, seams, and connections. All longitudinal and transverse joints, seams, and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA *HVAC Duct Construction Standards—Metal and Flexible* and NAIMA *Fibrous Glass Duct Construction Standards*. All longitudinal and transverse joints, seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, liquid sealants, or tapes. Tapes and mastics used to seal fibrous glass ductwork shall be listed and labeled in accordance with UL 181A and shall be marked “181 A-P” for pressure-sensitive tape, “181 A-M” for mastic or “181 A-H” for heat-sensitive tape. Tapes and mastics used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked “181 B-FX” for pressure-sensitive tape or “181 B-M” for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked “181 B-C.” Closure systems used to seal all ductwork shall be installed in accordance with the manufacturer's instructions. Unlisted duct tape is not permitted as a sealant on any duct.

Exception: Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

2801.1.1.8 Access port protection. Section 1102.3 of the 2015 IMC shall be DELETED in its entirety.

2801.2 Boilers. All boilers, pressure vessels, and associated pressure piping shall meet the standards for construction, installation, and inspection as set forth in KRS Chapter 236 and 815 KAR Chapter 15.

2801.3 Unfired pressure vessels. All unfired pressure vessels shall meet the standards set forth in Section VIII of the ASME Boiler and Pressure Vessel Code listed in chapter 35.

2801.4 Design of mechanical systems. The *building official* shall allow the use of the actual *occupant load* in lieu of Table 1004.1.2 in the design of mechanical ventilating systems. This applies to the mechanical code and ASHRAE 62 Standard listed in Chapter 35 of this code.

**CHAPTER 29
PLUMBING SYSTEMS**

DELETE Chapter 29 of the 2015 IBC in its entirety except for the following:

**SECTION 2901
GENERAL**

[P] 2901.1 Scope. The provisions of this chapter and the Kentucky State Plumbing Code shall govern the erection, installation, alteration, repairs, relocation, replacement, addition to, use, or maintenance of plumbing equipment and systems. Toilet and bathing rooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be constructed, installed, and maintained in accordance with the Kentucky State Plumbing Code, including all fees and licensing requirements. Private sewage disposal systems shall conform to 902 KAR 10:081 and 902 KAR10:085.

**SECTION 2902
MINIMUM PLUMBING FACILITIES**

2902.1 Minimum fixture requirements. In a *building* accommodating males and females, it shall be presumed that the occupants will be equally divided between males and females, unless otherwise denoted. Each *building* shall have the minimum fixture requirements established by 815 KAR 20:191.

CHAPTER 30 ELEVATORS AND CONVEYING SYSTEMS

SECTION 3001 GENERAL

3001.2 Referenced standards. Except as otherwise provided for in this code, the design, construction, installation, alteration, repair, and maintenance of elevators and conveying systems and their components shall conform to ASME A17.1/CSA B44 with the exception of rule 8.11.1.1.2, ASME A17.2, ASME A17.3, ASME A17.4, ASME A17.5, ASME A17.6, ASME A17.7/CSA B44.7, ASME A18.1 with the exception of rules 10.1.2.1 and 10.1.2.2, ASME B20.1, and ASCE 24 for construction in flood hazard areas established in Section 1612.3.

3001.5 Personnel and material hoists. Personnel and material hoists shall be designed utilizing an approved method that accounts for the conditions imposed during the intended operation of the hoist device. The design shall include, but is not limited to, anticipated loads, structural stability, impact, vibration, stresses, and seismic restraint. The design shall account for the construction, installation, operation, and inspection of the hoist tower, car, machinery and control equipment, guide members, and hoisting mechanism. Additionally, the design of personnel hoists shall include provisions for field testing and maintenance that will demonstrate that the hoist device functions in accordance with the design. Field tests shall be conducted upon the completion of an installation or following a major alteration of a personnel hoist.

SECTION 3009 POWER ELEVATOR OPERATION

3009.1 Designated operator. Every power elevator, except automatic and continuous-pressure operation types and sidewalk elevators, shall be in the charge of a competent designated operator.

3009.2 Emergency operation. All elevators shall conform to the requirements of ASME A 17.1 and ASME A17.3 listed in Chapter 35.

3009.2.1 Smoke detectors. Smoke detectors shall be installed in accordance with NFPA 72 and ASME A17.1 and ASME A17.3 listed in Chapter 35.

3009.2.2 Activation. The emergency operation shall be activated by smoke detectors installed in accordance with ASME A17.1, NFPA 72, and ASME A17.3 listed in Chapter 35.

3009.2.3 Automatic sprinklers. Where an automatic sprinkler is installed in an elevator hoistway or elevator equipment room, means shall be provided to automatically disconnect the main line power supply to the affected

elevator upon or prior to the application of water from sprinklers located in the machine room or elevator hoistway. This means shall be independent of the elevator control and shall not be self-resetting. The activation of sprinklers outside of the hoistway or machine room shall not disconnect the main line power supply. Smoke detectors shall not be used to activate sprinklers in these spaces or to disconnect the main line power supply.

Exceptions:

1. NFPA 13, Chapter 8, Section 8.15.5.6: The sprinkler required at the top of the elevator hoistway by 8.15.5.5 shall not be required where the hoistway for passenger elevators is noncombustible and the car enclosure materials meet the requirements of ASME A17.1, Safety Code for Elevators and Escalators.
2. KBC, Section 903.3.1.1.1: In elevator machine rooms fully enclosed with 2 hour fire-resistance-rated construction and where signs are posted on the entry door and within the room to prohibit storage of any kind, the sprinkler shall not be required.

3009.3 Accessible elevators. See Chapter 11 for *buildings* and facilities required to be accessible to persons with physical disabilities.

SECTION 3010 STAIRWAY CHAIRLIFTS AND PLATFORM LIFTS

3010.1 General. Inclined stairway chairlifts and inclined and vertical platform lifts shall conform to the requirements of ASME A18.1 listed in Chapter 35.

SECTION 3011 MAINTENANCE AND ACCIDENTS

3011.1 Contractor responsibility. The person installing any device covered by this chapter shall make all acceptance tests and shall be responsible for the care and safe operation of such equipment during its construction and until temporarily or finally accepted by the *building* owner or the owner's legal agent.

3011.2 Maintenance items. All operating and electrical parts and accessory equipment or devices subject to this chapter shall be maintained in a safe operating condition. The maintenance of all equipment covered by this chapter shall conform to ASME A17.1, ASME A18.1, and ASME B20 listed in Chapter 35.

3011.3 Incidents reported and recorded. The owner of the *building* shall immediately notify the state elevator inspector of every incident involving personal injury or death, allow the state elevator inspector to inspect all parts of the elevator,

and prevent removal of any of the parts of the elevator system until the state elevator inspector grants permission for removal. It shall be unlawful to use such device until after an examination by the state elevator inspector is made and approval of the equipment for continued use is granted. It shall be the duty of the state elevator inspector to make a prompt examination into the cause of the incident and to enter a full and complete report thereof in the records of the state elevator inspector's office. Such records shall be open for public inspection at all reasonable hours.

3011.4 Removal of damaged parts. It shall be unlawful to remove from the premises any part of the damaged construction, malfunctioning, or operating mechanism of elevators, or other equipment subject to the provisions of this chapter, until permission to do so has been granted by the state elevator inspector.

SECTION 3012 CONSTRUCTION DOCUMENTS AND PERMITS

3012.1 Application. The application for a *permit* shall be accompanied by *construction documents* in sufficient detail, indicating the location of the machinery room and equipment to be installed, relocated, or altered, and all supporting structural members, including foundations. The *construction documents* shall indicate all materials to be used and all loads to be supported or conveyed.

3012.2 Permits. Equipment or devices subject to the provisions of this code shall not be constructed, installed, relocated, or altered unless a *permit* has been received from the Department before the work is commenced. A copy of such *permit* shall be kept at the construction *site* at all times while the work is in progress.

SECTION 3013 CERTIFICATE OF COMPLIANCE

3013.1 General. Except for the installer of the unit of equipment, it shall be unlawful for persons to operate all equipment installed, relocated, or altered and governed by the provisions of this chapter until such equipment has been inspected and tested as required and a final or limited certificate of compliance has been issued by a state elevator inspector.

3013.2 Final certificate of compliance. The state elevator inspector shall issue a final certificate of compliance for each unit of equipment, which has satisfactorily met all of the inspections and tests required by this chapter. Such final certificate shall bear the signature of the person who made the inspection and tests, and shall designate the rated load and speed, the date of the acceptance tests and inspections, and the name of the state elevator inspector who made or witnessed such tests and inspections. The final certificate shall also include the necessary space for inserting the name

of the person who made the periodic inspection and witnessed the periodic and maintenance tests, and the date of the periodic inspection and the maintenance test.

3013.3 Construction use permit. The state elevator inspector is authorized to issue a construction use *permit* for any equipment covered by this chapter, which is hereafter installed, relocated, or altered, to permit limited use by the person designated therein during the period of such installation, relocation, or alteration. Such certificate shall be signed by the state elevator inspector, shall bear the dates of issue, and shall designate the class of service allowed.

3013.3.1 Tests and minimum safeguards required. A construction use *permit* shall not be issued for an elevator until such elevator has satisfactorily passed tests for rated load, car and counterweight safety, and terminal stopping devices. Permanent or temporary guards and enclosures shall be installed on the car, around the hoistway, and at the landing entrances. Equipment other than elevators shall be tested and protectives shall be provided as deemed necessary by the *building official* to ensure safe operation for the limited service specified.

3013.3.2 Special conditions. Automatic and continuous-pressure operation elevators shall not be placed in temporary operation from the landing pushbuttons unless the door-locking device and interlocks required by ASME A17.1 listed in Chapter 35 are installed and operative. Where the car is operable only from the inside, landing entrance guards shall be provided with locks that are releasable from the hoistway side only.

3013.3.3 Time limitation. Construction use *permits* shall be issued for periods of not more than 90 days. The state elevator inspector is authorized to renew construction use *permits* for additional periods of not more than 90 days each.

3013.4 Posting certificates of compliance. The owner or lessee shall post the last-issued certificate of compliance in a conspicuous place on the elevator, and be made available to the state elevator inspector upon request.

CHAPTER 31 SPECIAL CONSTRUCTION

SECTION 3103 TEMPORARY STRUCTURES

3103.1 General. *Tents, temporary structures, and other membrane structures erected for a period of less than 180 days shall comply with Section 432 of this code. Those erected for a longer period of time shall comply with applicable sections of this code relating to permanent structures.*

3103.1.1 Conformance. *Temporary structures and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements of this code as necessary to ensure public health, safety, and general welfare.*

3103.1.2 Permit required. *Temporary structures that cover an area greater than 400 square feet (11.16 m²), including connecting areas or spaces with a common means of egress or entrance shall not be erected, operated, or maintained for any purpose without obtaining a permit from the building official.*

SECTION 3107 SIGNS

3107.1 Signs. Section 3107.1 of the 2015 IBC shall be DELETED in its entirety.

SECTION 3108 TELECOMMUNICATION AND BROADCAST TOWERS

3108.3 Radio and television antennas on buildings, permits not required. *A building permit is not required for roof installation of antennal structures not more than 12 feet (3658 mm) in height for private radio or television reception. Such a structure shall not be erected to injure the roof covering, and when removed from the roof, the roof covering shall be repaired to maintain weather and water tightness. The installation of any antennal structure mounted on the roof of a building shall not be erected nearer to the lot line than the total height of the antennal structure above the roof, nor shall such structure be erected near electric power lines or encroach upon any street or other public space.*

3108.4 Radio and television antennas on buildings, permits required. Approval shall be secured for all roof-mounted antennal structures more than 12 feet (3658mm) in height above the roof. The application shall be accompanied by detailed drawings of the structure and methods of anchorage. All connections to the roof structure shall be properly flashed to maintain water tightness. The design and materials of construction shall comply with the requirements

of Section 3108.1 for character, quality, and minimum dimension.

3108.5 Dish antennas. An antenna consisting of a radiation element which transmits or receives radiation signals generated as electrical, light, or sound energy, and supported by a structure with or without a reflective component to the radiating dish, usually in a circular shape with a parabolic curve design constructed of a solid or open mesh surface, shall be known as a dish antenna.

3108.5.1 Permits. The approval of the building official shall be secured for all dish antenna structures more than 2 feet (610mm) in diameter erected on the roof of or attached to any building or structure. A permit is not required for dish antennas not more than 2 feet (610mm) in diameter erected and maintained on the roof of any building.

3108.5.2 Structural provisions. Dish antennas larger than 2 feet (610mm) in diameter shall be subject to the structural provisions of Sections 1608, 1609, and 3108.1. The snow load provisions of Section 1608 shall not apply where the antenna has a heater to melt falling snow.

SECTION 3109 SWIMMING POOLS

3109.1 General. *Swimming and bathing pools shall conform to the requirements of this section, provided that these regulations shall not be applicable to any such pool less than 24 inches (610 mm) deep or having a surface area less than 250 square feet (23.25 m²), except where such pools are permanently equipped with a water-recirculating system or involve structural materials. For the purpose of this code, pools are classified as private swimming pools or public swimming pools, as defined in Section 3109.2. Materials and constructions used in swimming pools shall comply with the applicable requirements of this code.*

3109.2 Definitions. The following definitions are defined in Chapter 2:

BARRIER.
HOT TUB.
IN-GROUND POOL.
POWER SAFETY COVER.
PRIVATE SWIMMING POOL.
PRIVATE SWIMMING POOL, INDOOR.
PRIVATE SWIMMING.
PUBLIC SWIMMING POOL.
SPA.
SWIMMING POOL.

3109.3 Permits, pool occupant load calculations and construction documents. A swimming pool or appurtenances thereto shall not be constructed, installed,

enlarged, or altered until *construction documents* have been submitted and a *permit* has been obtained from the *building official* having *jurisdiction* in accordance with Sections 104.15 and 104.16 of this code. The occupant load calculations of Section 3109.3.1 shall be used for the purpose of determining the *jurisdiction* and design professional seal requirements. The approval of all city, county, and state authorities having *jurisdiction* over *swimming pools* shall be obtained before applying to the *building official* for a *permit*. Certified copies of these approvals shall be filed as part of the supporting data for the *permit* application.

3109.3.1 Pool occupant load calculations. The occupant load of the *swimming pool*, appurtenances, and accessory *structures* shall be computed at a rate of one occupant per unit of area as prescribed by this section.

**TABLE 3109.3.1
POOL OCCUPANT LOAD**

OCCUPANCY	GROSS AREA IN SQUARE FEET PER OCCUPANT
Pool Surface Area	50 Gross
Deck Area Around the Pool	15 Gross

3109.3.2 Construction documents. *Construction documents* shall accurately show:

1. *Dimensions* and construction of the *swimming pool* and appurtenances;
2. Established distances to *lot lines*, *buildings*, walks, and fences;
3. Details of the water supply system, drainage, and water disposal systems;
4. All appurtenances pertaining to the *swimming pool*; and
5. Detailed *construction documents* of *structures*, vertical elevations and sections through the *swimming pool* showing depth.

3109.4 Locations. *Private swimming pools* shall not encroach on any front or side yard required by this code or by the governing zoning law, unless in accordance with specific rules of the *jurisdiction* in which the *swimming pool* is located. A wall of a *swimming pool* shall not be located less than 6 feet (1829 mm) from any rear or side property line or 10 feet (3048 mm) from any street property line, unless in accordance with the specific rules of the *jurisdiction* in which the *swimming pool* is located.

3109.5 Structural design. The *swimming pool structure* shall be engineered and designed to withstand the expected forces to which the *swimming pool* will be subjected.

3109.5.1 Wall slopes. To a depth up to 2 feet 9 inches (838 mm) from the top, the wall slope shall not be more than one unit horizontal in five units vertical (1:5).

3109.5.2 Floor slopes. The slope of the floor on the shallow side of the transition point shall not exceed one unit vertical to seven units horizontal (1:7). For *public swimming pools* greater than 1,200 square feet (111.6 m²), the slope of the floor on the shallow side of the transition point shall not exceed one unit vertical to ten units horizontal (1:10). The transition point between shallow and deep water shall not be more than 5 feet (1524 mm) deep.

3109.5.3 Walkways. All *public swimming pools* shall have walkways not less than 4 feet (1219 mm) in width extending entirely around the *public swimming pool*. Curbs or sidewalks around any *swimming pool* shall have a slip-resistant surface for a width of not less than 1 foot (305 mm) at the edge of the *swimming pool*, and shall be so arranged as to prevent return of surface water to the *swimming pool*.

3109.5.4 Steps and ladders. At least one *means of egress* shall be provided from *private swimming pools*. *Public swimming pools* shall provide ladders or other *means of egress* at both sides of the diving section and at least one *means of egress* at the shallow section; or at least one *means of egress* in the deep section and the shallow section if diving boards are not provided. Treads of steps and ladders shall have slip-resistant surfaces and *handrails* on both sides, except that *handrails* are not required where there are not more than four steps or where the steps extend the full width of the side or end of the *swimming pool*. Treads and risers of the *swimming pool* steps shall conform to the following:

1. Step treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed surface area of 240 square inches (0.15m²).
2. Risers shall have a maximum uniform height of 12 inches (305mm) as measured at the centerline of the tread. The height of the bottom riser shall not vary more than plus or minus 2 inches (51mm) from the uniform riser height.

3109.6 Water supply. All *swimming pools* shall be provided with a potable water supply, free of cross connections with the *swimming pool* or its equipment.

3109.6.1 Water treatment. *Public swimming pools* are regulated by the Cabinet for Health and Family Services, Department of Public Health, for purposes of water distribution and treatment systems and the proper operation and maintenance of all pool facilities (see 902

KAR 10:120, Kentucky Public Swimming and Bathing Facilities Regulation). *Private swimming pools* shall be designed and installed so that there is a *swimming pool* water turnover at least once every 18 hours, Filters shall not filter water at a rate in excess of 5 gallons per minute per square foot (205L/min/m²) of surface area. The *swimming pool owner* shall be instructed in the care of maintenance of the *swimming pool* by the supplier or builder, including treatment with high-test calcium hypochlorite (dry chlorine), sodium hypochlorite (liquid chlorine), or equally effective germicide and algicide and the importance of proper pH (alkalinity and acidity) control.

3109.7 Appurtenant structures. All appurtenant structures, installations, and equipment, such as showers, dressing rooms, equipment houses, or other *buildings* and *structures*, including plumbing, heating, and air conditioning systems, shall comply with all applicable requirements of this code.

3109.7.1 Accessories. All *swimming pool* accessories shall be designed, constructed, and installed so as not to be a safety hazard. Installations or *structures* for diving purposes shall be properly anchored to insure stability.

3109.8 Equipment installations. Pumps, filters, and other mechanical and electrical equipment for *public swimming pools* shall be enclosed in such a manner as to provide access only to authorized persons and not to bathers. Construction and drainage shall be arranged to avoid the entrance and accumulation of water in the vicinity of electrical equipment.

3109.8.1 Protection of heating equipment. Gas appliances located in rooms or spaces where corrosive or flammable chemicals are present shall be protected in accordance with the NFPA 54 National Fuel Gas Code.

3109.8.2 General. Suction outlets shall be designed to produce circulation throughout the *swimming pool* or *spa*. Single-outlet systems, such as automatic vacuum cleaner systems, or multiple suction outlets, whether isolated by valves or otherwise, shall be protected against user entrapment.

3109.8.3 Suction fittings. *Swimming pool* and *spa* suction outlets shall have a cover that conforms to APSP 7 or an 18-inch x 23-inch (457mm by 584mm) drain grate or larger, or an *approved* channel drain system.

Exception: Surface skimmers.

3109.8.4 Atmospheric vacuum relief system required. *Swimming pool* and *spa* single or multiple-outlet circulation systems shall be equipped with atmospheric vacuum relief should grate covers located therein become missing or broken. This vacuum relief system shall include at least one *approved* or engineered method of the type specified herein, as follows:

1. Safety vacuum release system conforming to APSP 7;
or

2. An *approved* gravity drainage system.

3109.8.5 Dual drain separation. Single or multiple pump circulation systems have a minimum of two suction outlets of the *approved* type. A minimum horizontal or vertical distance 3 feet (914mm) shall separate the outlets. These suction outlets shall be piped so that water is drawn through them simultaneously through a vacuum-relief-protected line to the pump or pumps.

3109.8.6 Pool cleaner fittings. Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches (152mm) and not more than 12 inches (305mm) below the minimum operational water level or as an attachment to the skimmer(s).

3109.9 Enclosures for public and private swimming pools. *Public* and *private swimming pools* shall be provided with an enclosure surrounding the *swimming pool* area. The enclosure shall meet the provisions of Sections 3109.9.1 through 3109.9.3.

3109.9.1 Enclosure. The enclosure shall extend not less than 4 feet (1219 mm) above the ground. All gates shall be self-closing and self-latching with the latches placed at least 4 feet (1219 mm) above the ground.

Exception: The following shall be exempt from the provisions of this section:

1. A *spa* or *hot tub* with an approved safety cover.
2. Fixtures that are drained after each use.

3109.9.2 Approved barriers. *Barriers* shall be designed to prevent uninvited persons from intruding into the *swimming pool* area. Enclosures shall be designed to withstand a horizontal concentrated force load of 200 pounds (896 mm) applied on a 1-square-foot (0.093 m²) area at any point of the fence enclosure. Compliance with the following criteria shall constitute a safe barrier:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the *barrier*, which faces away from the *swimming pool*. The maximum vertical clearance between the grade and the bottom of the *barrier* shall be 4 inches (102 mm) measured on the side of the *barrier*, which faces away from the *swimming pool*.
2. Openings in the *barrier* shall not allow the passage of a 4-inch (102-mm) diameter sphere.
3. Solid *barriers* shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the *barrier* is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 24 inches (610mm), the horizontal members shall be located on

the *swimming pool* side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44 mm) in width. (Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches (44mm) in width.

Exception: When intermediate horizontal members are located 34 inches (864mm) or more above grade, the spacing between vertical members shall not exceed 4 inches (102mm) in width.

5. Where the *barrier* is composed of horizontal and vertical members and the distance between the tops of the horizontal members is more than 24 inches (610mm) or more, spacing between vertical members shall not exceed 4 inches (102mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be 2 ¼ inches (75mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not less than 1 ¾ inches (44mm).
7. Where the *barrier* is composed of diagonal members, such as a lattice fence, the maximum

opening formed by the diagonal members shall be not more than 1.75 inches (44 mm).

3109.9.3 Private swimming pool enclosures.

1. An indoor *private swimming pool* enclosure may consist of the walls of the house including any entrance and *exit* doors, screens, or glass separations designed for the purpose of preventing uninvited persons from entering the *swimming pool*.
2. An exterior *private swimming pool* enclosure may surround the *swimming pool* area only or it may surround a larger area if the *barrier* prevents uninvited persons from entering the *swimming pool*.

3109.10 Diving boards. Minimum water depths and distances for diving hoppers for *swimming pools*, based on board height above water, shall comply with Table 3109.10(1) for *public swimming pools* and Table 3109.10(2) for *private swimming pools*.

The maximum slope permitted between point D₂ and the transition point shall not exceed one unit vertical to three units horizontal (1:3) in *private* and *public swimming pools*. D₁ is the point directly under the end of the diving boards D₂ is the point at which the floor begins to slope upwards to the transition point (see Figure 3109.10).

**Figure 3109.10
MINIMUM WATER DEPTHS AND DISTANCES BASED ON BOARD
HEIGHT FOR PUBLIC AND PRIVATE POOLS**

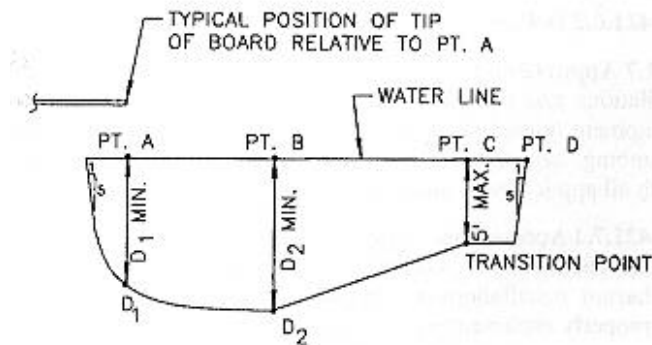


TABLE 3109.10 (1)
MINIMUM WATER DEPTHS AND DISTANCES BASED ON BOARD HEIGHT FOR PUBLIC POOLS

BOARD HEIGHT	MINIMUM DEPTH^a AT D₁ DIRECTLY UNDER END OF BOARD	DISTANCE^a BETWEEN D₁ AND D₂	MINIMUM DEPTH AT D₂
2'-2" (2/3 meter)	7'-0"	8'-0"	8'-6"
2'-6" (3/4 meter)	7'-6"	9'-0"	9'-0"
1 meter	8'-6"	10'-0"	10'-0"
3 meter	11'-0"	10'-0"	12'-0"

a. 1 foot = 304.8mm.

TABLE 3109.10 (2)
MINIMUM WATER DEPTHS AND DISTANCES BASED ON BOARD HEIGHT FOR PRIVATE POOLS

BOARD HEIGHT	MINIMUM DEPTH^a AT D₁ DIRECTLY UNDER END OF BOARD	DISTANCE^a BETWEEN D₁ AND D₂	MINIMUM DEPTH AT D₂
1'-8" (1/2 meter)	6'-0"	7'-0"	7'-6"
2'-2" (2/3 meter)	6'-10"	7'-6"	8'-0"
2'-6" (3/4 meter)	7'-5"	8'-0"	8'-0"
3'-4" (1 meter)	8'-6"	9'-0"	9'-0"

a. 1 foot = 304.8mm.

CHAPTER 33
SAFEGUARDS DURING CONSTRUCTION

SECTION 3305
SANITARY

3305.1 Facilities required. Sanitary facilities shall be provided during construction, remodeling, or demolition activities in accordance with the Kentucky State Plumbing Code.

**CHAPTER 34
EXISTING STRUCTURES**

**CHAPTER 34
EXISTING STRUCTURES**

3401.1 Scope. The *alteration, repair, addition*, or change of occupancy of existing *buildings* and *structures* shall be in accordance with the *International Existing Building Code* except as applicable in Sections 3401.2 through 3401.8. Where the IEBC references the IBC and Kentucky has amended the referenced IBC section, the Kentucky amendments shall supersede the IBC provisions.

3401.2 Maintenance. *Buildings* and *structures*, and parts thereof, shall be maintained in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in conformance with the code edition under which installed. The *owner* or the owner's designated agent shall be responsible for the maintenance of *buildings* and *structures*. The requirements of this chapter shall not provide the basis for removal or abrogation of fire protection and safety systems and devices in existing *buildings* or *structures*.

3401.3 Additional codes. *Alterations, repairs, additions*, and changes of occupancy to existing *buildings* or *structures* shall comply with the provisions for alterations, repairs additions, and changes of occupancy in the *International Fire Code, NFPA 54 Fuel Gas Code, International Mechanical Code, Kentucky State Plumbing Code, International Residential Code* and *NFPA 70*. The codes referenced herein replace the codes listed in Section 302.2 of the *International Existing Building Code*. Where provisions of the other codes conflict with provisions of this chapter, this chapter shall take precedence.

3401.4 Additions. *Additions* to any *building* or *structure* shall comply with the requirements of this code for new construction and Section 402 of the *International Existing Building Code* listed in Chapter 35. Additions shall not be made to an existing *building* or *structure* that will cause the existing *building* or *structure* to be in violation of any provisions of this code. An existing *building* plus additions shall comply with the height and area provisions of Chapter 5. If a *fire wall* separates the existing portion from the addition, both buildings shall comply with the height and area provisions of Chapter 5 as separate buildings.

3401.5 Alterations. *Alterations* to any *building* or *structure* shall comply with the requirements of this code for new construction and Section 403 of the *International Existing Building Code*. Portions of the *building* or *structure* not altered and not affected by the *alteration* are not required to comply with the code requirements for a new *building* or *structure*.

3401.6 Repairs. *Buildings* and *structures*, and parts thereof, shall be repaired in compliance with Sections 401.2 and 404 of the *International Existing Building Code*.

3401.7 Compliance alternatives applicability. *Structures* existing prior to August 15, 1982, in which there is work involving *additions, alterations*, or changes of occupancy shall be made to conform to the requirements of Chapter 14 or Chapters 5 through 13 of the *International Existing Building Code*.

3401.8 Compliance with other codes. *Buildings* that are evaluated in accordance with this section shall comply with the Kentucky Standards of Safety (815 KAR 10:060). This section replaces Section 1401.3.2 of the *International Existing Building Code*.

**CHAPTER 35
REFERENCED STANDARDS**

AMCA

Air Movement and Control Association International
30 West University Drive
Arlington Heights, IL 60004

Standard Reference Number	Title	Referenced in code section number
230-15	Laboratory Methods of Testing Air Circulating Fans for Rating and Certification.....	2801.5

ANSI

American National Standards Institute
25 West 43rd Street, Fourth Floor
New York, NY 10036

Standard Reference Number	Title	Referenced in code section number
E1.21 - 13	Entertainment Technology -Temporary Structures Used for Technical Production of Outdoor Entertainment Events.....	432.16.1

APSP

The Association of Pool & Spa Professionals
211 Eisenhower Avenue
Alexandria, VA 22314

Standard Reference Number	Title	Referenced in code section number
ANSI/APSP 7 -2013	Standard for Suction Entrapment Avoidance in Swimming Pools,..... Wading Pools, Spas, Hot Tubs and Catch Basins	31009.8.3, 3109.8.4

ASHRAE

American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329-2305

Standard Reference Number	Title	Referenced in code section number
ASHRAE 62.1-2010	Ventilation for Acceptable Indoor Air Quality.....	2801.1, 2801.4



American Society of Mechanical Engineers.
 Three Park Avenue
 New York, NY

Standard Reference Number	Title	Referenced in code section number
A17.1 2010/CSA B44-10 (except Rule 8.11.1.1.2)	Safety Code for Elevators and Escalators.....	907.3.3, 911.1.6, 1009.4, 1607.9.1, 3001.2, 3001.4, 3002.5, 3003.2, 3007.1, 3008.1.3, 3008.7.1, 3009.2, 3009.2.1, 3009.2.2, 3011.2, 3013.3.2
A17.2-2010	Guide for Inspection of Elevators, Escalators, and Moving Walks.....	3001.2
A17.3-2011	Safety Code for Existing Elevators and Escalators.....	3001.2, 3009.2, 3009.2.1, 3009.2.2
A17.4-1999	Guide for Emergency Personnel.....	3001.2
A17.5-2011	Elevator and Escalator Electrical Equipment.....	3001.2
A17.6-2010	Standard for Elevator Suspension, Compensations and Governor Systems (as per ASME A1.1-2010).....	3001.2
A17.7 -2007/CSA B44-07	Performance-Based Safety Code for Elevators and Escalators.....	3001.2
A18.1-2011 (except Rules 10.1.2.1 and 10.1.2.2)	Safety Standard for Platform Lifts and Stairway Chairlifts.....	1109.8, 3001.2, 3010.1, 30011.2
B16.18-2001 (Reaffirmed 2005)	Cast Copper Alloy Solder Joint Pressure Fittings.....	909.13.1
B16.22-2001 (Reaffirmed 2005)	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.....	909.13.1
B20.1-2012	Safety Standard for Conveyors and Related Equipment.....	3001.2, 3004.3
B31.3-2004	Process Piping.....	415.11.6
Boilers and Pressure Vessels Code.....		2801.2, 2801.3
B31.1—89	Power Piping.....	2801.2, 2801.3
Section I—89	Power Boilers.....	2801.2, 2801.3
Section II—89	Materials.....	2801.2, 2801.3
Section IV—89	Heating Boilers.....	2801.2, 2801.3
Section V—89	Nondestructive Examination.....	2801.2, 2801.3
Section VIII—89	Pressure Vessels.....	2801.2, 2801.3
Section IX—89	Welding and Brazing.....	2801.2, 2801.3



International Code Council, Inc.
 500 New Jersey Ave, NW
 6th Floor
 Washington, DC 20001

Standard Reference Number	Title	Referenced in code section number
IECC – 09	International Energy Conservation Code.....	1301.1.1
IECC – 12	International Energy Conservation Code.....	101.4.6, 201.3, 202, 1203.1, 1301.1.1, 1405.3.1, 2702.2.9, 2702.2.11, 2702.2.12, 2702.2.13, 2702.4, 3003.3, 3008.1.2, 3102.1, 3103.1, 3111.1, 3111.1.1, 3302.3, 3303.7, 3309.2

KY CODES

Standard Reference Number	Title	Referenced in code section number
FEMA 460, 9/2005	Federal Emergency Management Assistance.....	2209.1
KGS Map and Chart 33 (Series XII, 2001)	Kentucky Geological Survey, Karst Occurrence in Kentucky.....	1803.5.13
KSOS	Kentucky Standards of Safety.....	815 KAR 10:060, 101.5, 202, 415.9.1.3, 901.2, 2702.3
KSPC	Kentucky State Plumbing Code.....	101.4.4, 201.3, 415.9.3, 603.1.2, 718.5, 1206.3.3, 1503.4, 2901.1, 3305.1
NGMASDM	National Greenhouse Manufacturers Association Structural Design Manual.....	433.3.2.1
SEAOK	Special Inspection Guidelines.....	1704.3

NFPA

National Fire Protection Association
 1 Batterymarch Park
 Quincy, MA 02269-9101

Standard Reference Number	Title	Referenced in code section number
NFPA 54-12	National Fuel Gas Code.....	101.4.1, 201.3, Table 307.1(1), 432.15.1, 415.9.2, 2113.11.1.2, 2113.15, 2801.1, 3109.8.1
NFPA 70-17	National Electrical Code	108.3, 415.11.1.8, 432.13.6, 432.14.14.7, 904.3.1, 907.6.1, 909.12.2, 909.16.3, 1205.4.1, 2701.1, 2702.1.2, G501.4, G1001.6, H106.1, H106.2, K101, K111.1
NFPA 79-12	Electrical Standard for Industrial Machinery.....	2701.3
NFPA 90A-12	Installation of Air-Conditioning and Ventilating Systems.....	1203.7
NFPA 90B-12	Installation of Warm Air Heating and Air-Conditioning Systems.....	1203.7
NFPA 101-12	Life Safety Code.....	117.1, 117.2, 1029.6.2
NFPA 520-10	Subterranean Spaces.....	202, 405.1, 429.2

NGMASD

National Greenhouse Manufactures Association
 4305 North Sixth Street, Suite A
 Harrisburg, PA 17110

Standard Reference Number	Title	Referenced in code section number
	National Greenhouse Manufactures Association Structural Design Manual.....	431.3.2.

