2013 Kentucky Residential Code

Second Edition
February 2014

As Adopted by:

KENTUCKY BOARD OF HOUSING, BUILDINGS AND CONSTRUCTION

Department of Housing, Buildings and Construction
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PREFACE

The *Kentucky Residential Code (KRC)*, now in its 7th year, is based upon *the 2012 International Residential Code* published by the International Code Council, Inc., with the specific Kentucky amendments. The Kentucky amendments to the code will be published as a separate document. The KRC provides minimum 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 Kentucky Board of Housing, Buildings and Construction through February 2014.

The *Kentucky Residential Code* may be amended from time to time by the Board of Housing, Buildings and Construction through the regulatory process by considering proposals from code enforcement officials, industry and design professionals, and other interested persons and organizations. Changes are discussed in an open meeting of the board. Changes approved by the board and the Legislative Review Commission are printed in the Kentucky Administrative Register and posted on the DHBC website.

The Kentucky Residential Code is a "mini/maxi" code, in that it establishes minimum and maximum building code requirements for detached single family dwellings, two-family dwellings and townhouses and no local government shall adopt or enforce any other building code on these units.

SAMPLE ORDINANCE FOR ADOPTION OF THE
INTERNATIONAL RESIDENTIAL CODE
FOR SINGLE FAMILY DWELLINGS

ORDINANCE NO. _____

An ordinance of the _____ adopting the 2013 edition of *the Kentucky Residential Code,* regulating and controlling the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of one- and two-family dwellings and townhouses in the _____; providing for the issuance of permits and collection of fees therefore when used with money; repealing Ordinance No. of the _____ and all other ordinances and parts of the ordinances in conflict therewith.

The _____ of the _____ does ordain as follows:

Section 1. That certain documents, three (3) copies of which are on file in the office of the _____ **[KEEPER OF RECORDS]** ___ and the _____, being marked and designated *as Kentucky Residential Code,* is hereby adopted as the code of the _____ for regulating the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of one- and two-family dwellings and townhouses not more than three stories in height in the _____ and providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, conditions and terms of such *Kentucky Residential Code,* 2013 edition, on file in the office of the _____ are hereby referred to, adopted and made a part hereof as if fully set out in this ordinance.

Section 2. The following sections are hereby revised:

Section R101.1 Insert: [NAME OF JURISDICTION]
Table R301.2(I) Insert: [APPROPRIATE DESIGN CRITERIA)

Section 3. That Ordinance No. _____of _____ entitled (fill *in here the complete title of the present ordinance or ordinances in effect at the present time so that they will be repealed by definite mention)* and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4. That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The _____**-** hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 5. That the **[JURISDICTION'S—KEEPER OF RECORDS]** is hereby ordered and directed to cause this ordinance to be published. *(An additional provision may be required to direct the number of times the ordinance is to be published and to specify that it is to be in a newspaper in general circulation. Posting may also be required.)*

Section 6. That this ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect _____from and after the date of its final passage and adoption.

ACKNOWLEDGEMENTS

The Commonwealth of Kentucky gratefully acknowledges the contribution of time, expertise and diligent effort generously given by members of the Kentucky Board of Housing, Buildings and Construction in the continuing development of the *Kentucky Residential Code*. Current Board members are as follows:

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CHAPTER 1
SCOPE AND ADMINISTRATION

SECTION R101
GENERAL

R101.1 Title. These provisions shall be known as the *Kentucky Residential Code for One- and Two-family Dwellings* and shall be cited as such and will be referred to herein as "this code."

R101.2 Scope. The provisions of the *Kentucky Residential Code for One- and Two-family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above *grade plane* in height with a separate means of egress and their *accessory structures*

Exceptions:

1. Live/work units complying with the requirements of Section 419 of the *Kentucky Building Code* shall be permitted to be built as one- and two-family *dwellings* or townhouses. Fire suppression required by Section 419.5 of the *Kentucky Building Code* when constructed under the *International Residential Code for One- and Two-family Dwellings* shall conform to Section P2904.
2. Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the *Kentucky Residential Code for One- and Two-family Dwellings* when equipped with a fire sprinkler system in accordance with Section P2904.
3. Farm dwellings and other buildings and structures located on farms which are incident to the operation of the farm and located outside the boundary of a municipality; but only if they are not used in the business of retail trade, as a regular place of work for 10 or more people or for the processing or storage of timber products.
4. Manufactured homes constructed under federal HUD standards. However, the exterior electric, water and sewer connections and additions to the home are not exempt.
5. Swimming pools constructed completely above grade.

R101.3 Intent. The purpose of this code is to establish minimum and maximum requirements to safeguard the public safety, health and general welfare through affordability, structural strength, means of egress facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations. No local government shall adopt or enforce any other building code for detached single family dwellings, two-family dwellings and townhouses.

R101.4 Other residential buildings. Multiple single-family dwellings (townhouses) over three stories above grade in height or without separate entrances shall comply with the Kentucky Building Code (KBC).

R101.5 Accepted practices. In the absence of provisions not specifically contained in this code or final decisions of the appeals board, the specification and standards listed in Chapter 44 shall be deemed to represent accepted engineering practice with respect to materials, equipment, systems or method of construction as specified and shall be acceptable.

R101.6 Licensed HVAC contractors. All work involving HVAC as defined and required by KRS Chapter 198B shall be provided by a licensed Journeyman HVAC Mechanic working under the supervision of a licensed Master HVAC Contractor. The building official will require proof of licensure when making inspections.

R101.7 Plumbing contractors and inspections. All plumbing installations shall be performed under the supervision of a Kentucky Licensed Master Plumber according to law and shall be inspected and approved by the state plumbing inspector prior to usage pursuant to KRS Chapter 318 and 815 KAR Chapter 20. The building official will require proof of licensure when making inspections.

R101.8 Electrical contractors and inspections. All electrical installations shall be performed by licensed electricians according to law and shall be inspected by a certified electrical inspector pursuant to KRS 227.489 and KAR 35:015. The building official will require proof of licensure when making inspections.

SECTION R102
APPLICABILITY

R102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

R102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law. Other local, state or federal law shall be consulted to determine the existence of other powers given to the code official, such as those related to demolition or authority over unsafe structures; however, no local ordinance shall

establish any additional or contradictory building construction standard than those adopted in this code.

R102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

R102.4 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 R102.4.1 and R102.4.2.

> **Exception:** Where enforcement of a code provision would violate the conditions of the *listing* of the *equipment* or *appliance*, the conditions of the *listing* and manufacturer's instructions shall apply.

> **R102.4.1 Differences.** Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

> **R102.4.2 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, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

R102.5 Appendices. Provisions in the appendices of the 2013 Kentucky Residential Code shall not apply unless specifically referenced in the adopting ordinance.

R102.5.1 In-ground swimming pools. The provisions of Appendix G as amended in these regulations shall control the design and construction of in-ground swimming pools installed in or on the lot of a one- or two-family dwelling.

> **R102.5.2 Appendix K, Sound transmission**. The provisions found in Appendix K shall apply to wall and floor-ceiling assemblies separating dwelling units including those separating townhouses.

R102.6 Partial invalidity. In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any o f the other parts or provisions.

R102.7 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 is specifically covered in this code, the locally adopted property maintenance code, or as is deemed necessary by the *building official* for the general safety and welfare of the occupants and the public.

> **R102.7.1 Additions, alterations or repairs.** *Additions, alterations* or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with all of the requirements of this code, unless otherwise stated. *Additions, alterations* or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.

R102.8 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.

R102.9. Electrical. The electrical system shall be installed in compliance with NFPA 70 as adopted by the Commonwealth of Kentucky.

SECTION R103
DEPARTMENT OF BUILDING SAFETY

> **R103.1 Creation of enforcement agency.** The department of building safety is hereby created and the official in charge thereof shall be known as the *building official.*

> **R103.2 Appointment.** The *building official* shall be appointed by the chief appointing authority of the *jurisdiction.*

> **R103.2.1 Certified inspectors.** The local government shall provide at least one Kentucky Certified Building Inspector, Level I, pursuant to 815 KAR 7:070, and certified electrical inspector, certified according to 815 KAR 35:015. The local government shall report the name of all inspectors to the Department and the Department shall be notified of any changes in inspection personnel. To enforce the residential code only, the local government shall provide at least one inspector that has achieved 1 & 2 Family Dwelling Certification.

R103.3 Deputies. In accordance with the prescribed procedures of this *jurisdiction* and with the concurrence of the appointing authority, the *building official* shall have the authority to appoint a deputy *building official*, the related technical officers, inspector, plan examiners and other employees. Such employees shall have powers as delegated by the *building official*. These appointments shall meet the requirements of 815 KAR 7:070 for certification associated with their job duties.

SECTION R104
DUTIES AND POWERS OF THE BUILDING OFFICIAL

R104.1 General. The *building official* is hereby authorized and directed to enforce the provisions of this code. The *building official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in conformance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

R104.2 Applications and permits. The *building official* shall receive applications, review *construction documents* and issue permits for the erection and alteration of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

R104.3 Notices and orders. The *building official* shall issue all necessary notices or orders to ensure compliance with this code.

R104.4 Inspections. The *building official* is authorized to make all of the required inspections, or the *building official* shall have the authority to accept reports of inspection by *approved agencies* or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The *building official* is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

R104.5 Identification. The *building official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

R104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *building official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *building official* or designee is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *building official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *building official* shall have recourse to the remedies provided by law to secure entry.

R104.7 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 the retention of public records as promulgated by the Kentucky Department of Libraries and Archives pursuant to KRS 171.450.

R104.8 Liability. The *building official,* member of the board of appeals or employee charged with the enforcement of this code, while acting for the *jurisdiction* in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the *jurisdiction* until the final termination of the proceedings. The *building official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

R104.9 Approved materials and equipment. Materials, *equipment* and devices *approved* by the *building official* shall be constructed and installed in accordance with such approval.

> **R104.9.1 Used materials and equipment.** Used materials, *equipment* and devices shall not be reused unless *approved* by the *building official.*

R104.10 Modifications. Wherever 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, provided the *building official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire safety or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

> **R104.10.1 Flood hazard areas.** The *building official* shall not grant modifications to any provision related to flood hazard areas as established by local jurisdiction without the granting of a variance to such provisions by the board of appeals.

SECTION R105
PERMITS

R105.2 Work exempt from permit. Exemption 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 does not exceed 200 square feet (18.58 m^2).
2. Fences not over 7 feet (1829 mm) high.
3. Retaining walls that are not over 4 feet (1219 mm) in height measured from grade at the bottom of the wall to the top of the wall.
4. Water tanks supported directly upon *grade* if the capacity does not exceed 5000 gallons (18927L) and the ratio of height to diameter or width does not exceed 2 to 1.
5. Sidewalks and driveways.
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
7. Swings and other playground equipment.
8. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
9. Decks not exceeding 200 square feet (18.58 m^2) in area, that are not more than 30 inches (762mm) above *grade* at any point, are not attached to a *dwelling* and do not serve the exit door require by Section R311.4.

Electrical:

1. Listed cord-and-plug connected temporary decorative lighting.
2. Reinstallation of attachment plug receptacles but not the outlets therefor.
3. Replacement of branch circuit overcurrent devises of the required capacity in the same location.
4. Electrical wiring, devices, appliances, apparatus or equipment operations at less than 25 volts and not capable of supplying more than 50 watts of energy.
5. Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.
6. The provisions of this code shall not apply to electrical equipment used for radio and television transmissions.
7. The installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliance.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
3. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Mechanical:

1. Portable heating appliance;
2. Portable ventilation equipment;
3. Portable cooling unit;
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any part which does not alter its approval or make it unsafe.
6. Portable evaporative cooler;
7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.
8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, 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.

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.

R105.3 Application for permit. To obtain a *permit*, the applicant shall first file an application in writing on a form furnished for that purpose by the department of building safety. 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 building or additions shall be accompanied by a copy of the current site survey bearing the seal and of a Kentucky Registered Land Surveyor, except the *building officia*l 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 by Section 106.1.
5. Give such other data and information as required by the building official.

R105.3.1 Action of applicant. The *building official* shall examine or cause to be examined application for permits and amendments thereto within a reasonable time after filing. If the application or the *construction documents* do not conform to the requirements of pertinent laws, the *building official* shall reject such application in writing stating the reasons therefor. If the *building official* is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the *building official* shall issue a *permit* therefor as soon as practicable.

R105.3.1.1 Determination of substantially improved or substantially damaged existing buildings in flood hazard areas. For applications for reconstruction, rehabilitation, addition or other improvement of existing buildings or structures located in an area prone to flooding as established by local jurisdiction the building official shall examine or cause to be examined the construction documents and shall prepare a finding with regard to the value of the proposed work. For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its pre-damage condition. If the building official finds that the value of proposed work equals or exceeds 50 percent of the market value of the building or structure before the damage has occurred or the improvement is started, the finding shall be provided to the board of appeals for a determination of substantial improvement or substantial damage. Applications determined by the board of appeals to constitute substantial improvement or substantial damage shall meet the requirements of Section R322.

SECTION R106
CONSTRUCTION DOCUMENTS

R106.1 Submittal documents. Submittal documents consisting of *construction documents*, and other data shall be submitted in two or more sets with each application for a *permit*. Where special conditions exist, the *building official* is authorized to require additional *construction documents* to be prepared by a licensed *design professional.*

Exception: The *building official* is authorized to waive the submission of *construction documents* and other data not required to be prepared by a licensed *design professional* if it is found that the nature of the work applied for is such that reviewing of *construction documents* is not necessary to obtain compliance with this code.

R106.1.3 Information on construction in flood hazard areas. For buildings and structures located in whole or in part in flood hazard areas as established by local jurisdiction or floodplain manager floor construction documents shall include:

1. Delineation of flood hazard areas, floodway boundaries and flood zones and the design flood elevation, as appropriate.

2. The elevation of the proposed lowest floor, including *basement*; in areas of shallow flooding (AO zones), the height of the proposed lowest floor, including *basement*, above the highest adjacent grade; and

3. The elevation of the bottom of the lowest horizontal structural member in coastal high hazard areas (V zone); and

4. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the *building official* and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources.

R106.2 Site plan or plot plan. The *construction documents* submitted with the application for *permit* shall be accompanied by a site plan showing the size and location of new construction and existing structures on the site and distances from *lot lines*, the established street grades and the proposed finished grades; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The *building official* is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

106.5 Retention of construction documents. The *building official*, as required by the Kentucky Department of Libraries and Archives administrative regulations, shall retain approved construction documents.

SECTION R107
TEMPORARY STRUCTURES AND USES

R107.3 Temporary power. The *building official* and the applicable licensed and certified inspector listed in Section 101.8 are 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 R108
FEES

~~**R108.5 Refunds.** The *building official* is authorized to establish a refund policy.~~

R108.6 Work commencing before permit issuance. Any person who commences work requiring a *permit* on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the applicable governing authority that shall be in addition to the required *permit* fees but not less than $500.

R108.7 Accounting. The *building official* shall keep an accurate account of all fees collected and such collected fees shall be deposited monthly in the jurisdiction treasury, or otherwise disposed of as required by law.

SECTION R109
INSPECTIONS

R109.1 Types of inspections. For onsite construction, from time to time the *building official*, upon notification from the *permit* holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the *permit* holder or his or her agent wherein the same fails to comply with this code. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

R109.1.3 Floodplain inspections. For construction in areas prone to flooding as established by local jurisdiction, upon placement of the lowest floor, including *basement*, and prior to further vertical construction, the *building official* shall require submission of documentation, prepared and sealed by a registered *design professional*, of the elevation of the lowest floor, including *basement*, required in Section R322.

R109.1.6 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.

R109.1.6.1 Off-site construction. In-plant inspections in production and manufacturing facilities for *industrialized building systems* shall be conducted by the Department or its authorized agent.

R109.1.6.2 On-site construction. On-site construction related to modular homes or one- and two-family dwelling installations may be permitted and inspected by the local *building official* having *jurisdiction* upon notice from the Department of an approved modular home. The local code official having *jurisdiction* shall be responsible for inspection of the foundation system, placement of the building, connection of the units, final set-up of the units and issuance of the certificate of occupancy. The local *building official* shall be responsible for inspection of these systems for zoning, water supply and sewage disposal, and other applicable local ordinance purposes.

R109.1.7 Final inspections. 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 R110. If compliance has not been achieved, violations of the approved construction documents and *permit* shall be noted and immediately communicated to the owner, agency and other person holding the *permit*. It shall be the owner's responsibility and the responsibility of the person responsible for the construction work to fulfill any compliance deficiencies noted.

SECTION R110
CERTIFICATE OF OCCUPANCY

R110.2 Change in use. Changes in the character or use of an existing structure shall not be made except as specified in Sections 3408 and 3409 of the *Kentucky Building Code*.

SECTION R111
SERVICE UTILITIES

R111.1 Connection of service utilities. No person shall 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 *approved* by the *building official and the applicable licensed and certified inspector listed in sections R101.6, R101.7 and R101.8.*

R111.2 Temporary connection. The *building official and the applicable licensed and certified inspector listed in section R101.8* shall have the authority to authorize and approve the temporary connection of the building or system to the utility, source of energy, fuel or power.

SECTION R112
BOARD OF APPEALS

NOTE: Section R112.1 is hereby deleted from the IRC in its entirety and replaced with the following:

R112.1 General. All appeals from the decisions of code 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 board when aggrieved by a decision of the local code official. The board shall further hear appeals directly from a party aggrieved by the decision of an agent of the Department.

R112.2 Appeal by fire code official. Decisions rendered by the code official with respect to enforcement of the *Kentucky Building Code* on any building may be appealed by the local fire code official of the jurisdiction if the fire code official is aggrieved by that decision.

R112.3 Local appeals board. Local appeals boards may be appointed to hear appeals from the decisions of the local code official in accordance with the provisions of Sections 112.3.1 through 112.3.4.

R112.3.1 Appointment. The mayor or county judge executive of a local government which 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 code official regarding building code requirements.

R112.3.2 Cooperative agreements. Local governments which 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.

R112.3.3 Disqualification of member. Local code officials or employees of a local inspection department shall not sit on a local appeals board if the 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.

R112.3.4 Right to appeal. Any party to a decision by the local code 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.

R112.3.5 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.

R112.3.6 Board decision. The local appeals board shall render a decision within five working days after the hearing. The board may uphold, amend or reverse the decision of the local code official, and there shall be no appeal from the decision of the local appeals board other than by appeal to the Board of Housing, Buildings and Construction.

R112.3.7 Open hearing. All hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any all persons whose interests are affected shall be given an opportunity to be heard.

R112.3.7.1 Procedure. The 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.

R112.3.8 Board decision. The board shall modify or reverse the decision of the code official by a concurring vote of three members.

R112.4 State appeals board. Application for appeal by a

property owner may be made when it is claimed in writing 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, or an equally good or better form of construction can be used, or that the code 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.

R112.4.1 Application procedure. Appeals to the board shall be in writing and shall be addressed to the Commissioner of the Department of Housing, Buildings and Construction, 101 Sea Hero Road, Suite 100, Frankfort, Kentucky 40601-5412; Attention: Appeals Board. 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 code official or local code official relative to those provisions is being contested and a copy of the decision rendered by the local appeals board, if any.

R112.4.2 Investigation of appeal. The Commissioner shall immediately notify the board or the five-member committee authorized by the board 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 board or committee on the disposition of the case in question, within 30 days.

R112.4.3 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 which led to the appeal.

R112.4.4 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.

R112.4.5 Administrative hearing. Pursuant to KRS Chapter 13B, if the issue has not been settled by agreement of the parties within limitations set by Section 112.4.2, the Board shall schedule an administrative hearing on the matter. The cost of any appeal forwarded to the Department because there is no local appeals board 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.

112.4.6 Judicial appeals. Final orders of the Board are appealable to the Circuit Court in the county in which the property is located.

SECTION R113
VIOLATIONS

R113.4 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 provided by KRS 198B.990 and other applicable law.

SECTION R114
STOP WORK ORDER

R114.1 Authority. Whenever the *building official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the building official is authorized to issue a stop work order.

R114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease according to the time limitation on the order. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

R114.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

R114.4 Limitation on changes. No inspector shall be authorized to require changes on-site which 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 official having construction document review responsibility who shall require corrections if the code so requires.

SECTION R115
PROOF OF INSURANCE

R115.1 Compliance with law. The issuance of a building permit shall be contingent upon presentation of proof to the effect 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 Kentucky law relating to worker's compensation and unemployment insurance.

R115.2 General applicability. Compliance with this section shall be achieved by presenting certificates or other forms approved by the Kentucky Labor Cabinet to the code official issuing the permit.

SECTION R116
EFFECTIVE DATES

R116.1 General. Effective October ~~January~~ 1, 2014, this code shall be mandatory and no permit shall be issued for construction under any other building code.

CHAPTER 2
DEFINITIONS

SECTION R202
DEFINITIONS

NOTE: THE DEFINITION OF "HABITABLE ATTIC" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

BOARD or BOARD OF HOUSING. Means the Kentucky Board of Housing, Buildings and Construction.

BUILDING. is defined by KRS 198B.010(4) and " means 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, and also means single-family dwellings, including those sold or constructed under a trade or brand name. 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 manufactured home governed by the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. secs. 5401 et seq., or a farm dwelling 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.

COLLAR BEAM/TIE. A horizontal framing member connecting opposing rafter elements for stability.

COMMISSIONER. Defined by KRS 198B.010(9) and means the commissioner of the Department of Housing, Buildings and Construction.

FARM. Means 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 which the property is located.

INDUSTRIALIZED BUILDING SYSTEM or BUILDING SYSTEM. is defined by KRS 198B.010(16) and means any structure or component thereof which is wholly or in substantial part fabricated in an off-site manufacturing facility for installation or assembly on a permanent foundation at the building site.

KNEE WALL. Any short wall used as a part of the support for a roof structure.

KRS. means the Kentucky Revised Statutes.

MANUFACTURED HOME. is defined by KRS 198B.010(23) and 227.550 and means 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.

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

DEPARTMENT. means the Department of Housing, Buildings and Construction.

ORDINARY REPAIR. is defined by KRS 198B.010(19) and means 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, alter the occupancy or use of the building, or affect, by rearrangement, exitways and means of egress; but shall not include additions to, or alteration 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 or safety.

PERPENDICULAR LUMBER SHEATHING. For the purposes of this code, any lumber sheathing, either spaced or laid side-by-side having an angle of intersection with the rafter or joist of 60 degrees or greater.

RATIONAL ANALYSIS. Alternative analytical calculations, experimental data, published design data or other referenced citations that have been approved for use by the building official.

REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance. See also "ordinary repair."

CHAPTER 3
BUILDING PLANNING

SECTION R301
DESIGN CRITERIA

R301.1.1 Alternative provisions. As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards the design shall comply with the Kentucky Building Code.

1. American Forest and Paper Association (AF&PA) Wood Frame Construction Manual (WFCM).
2. American Iron and Steel Institute (AISI) Standard for Cold-Formed Steel Framing – Prescriptive Method for One-and Two-Family Dwellings (COFS/PM) with Supplement to Standard for Cold-Formed Steel Framing – Prescriptive Method for One-and Two-Family Dwellings.
3. ICC Standard on the Design and Construction of Log Structures (ICC 400).
4. Federal Emergency Management Administration, Homebuilders' Guide to Earthquake Resistant Construction, FEMA 232-June 2006.

R301.2 Climatic and geographic design criteria. Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. Additional criteria shall be established as set forth in Tables R301.2(1) and R301.2.2.1.

NOTE: TABLE R301.2(1) AS IT APPEARS IN THE 2012 INTERNATIONAL RESIDENTIAL CODE IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

TABLE R301.2(1)
DESIGN SNOW, CLIMATIC AND GEOMETRIC DESIGN CRITERIA FOR KENTUCKY COUNTIES

COUNTY	GROUND SNOW LOAD p_g (psf)[a]	COUNTY	GROUND SNOW LOAD p_g (psf)[a]	COUNTY	GROUND SNOW LOAD p_g (psf)[a]	COUNTY	GROUND SNOW LOAD p_g (psf)[a]
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	15
Barren	15	Fleming	15	Lee	15	Owsley	15
Bath	15	Floyd	20	Leslie	20	Pendleton	15
Bell	15[b]	Franklin	15	Letcher	20[c]	Perry	15
Boone	20	Fulton	15	Lewis	20	Pike	15
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	15[b]	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	15	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

Continued next page.

TABLE R301.2(1)
DESIGN SNOW, CLIMATIC AND GEOMETRIC DESIGN CRITERIA FOR KENTUCKY COUNTIES (continued)

WIND DESIGN	Basic wind speed shall be 90 mph (40 m/s) for all Kentucky counties. Topographic effects shall be investigated.
SEISMIC DESIGN CATEGORY	Seismic Design Category shall be in accordance with Table R301.2.2.1 ~~and Figures R301.2.2.1(1 to 25)~~.
WEATHERING	Weathering probability for concrete shall be classified as SEVERE for all Kentucky counties and meet requirements of Table R402.2.
FROST LINE DEPTH	Frost depth shall be in accordance to Table 403.1.4.
TERMITE PROTECTION	Termite infestation probability shall be MODERATE TO HEAVY for all Kentucky counties.
FLOOD HAZARDS	Buildings in identified floodways shall be designed in accordance to Section R301.2.4.

For SI: 1 pound per square foot (psf) = 0.0479 kN/m^2.
a. Listed values of ground snow load, pg, shall be used in accordance to Section R301.2.3 of this code.
b. Ground snow load values for elevations above 2600 feet (792.480 m) in this county shall be based on site-specific case studies or by other approved means of rational analysis.
c. Ground snow load values for elevations above 2500 feet (762 m) in this county shall be based on site-specific case studies or by other approved means of rational analysis.

R301.2.2 Seismic provisions. The seismic provisions of this code shall apply to buildings constructed in Seismic Design Categories D0, D1, and D2, as determined in accordance with this section. Buildings in Seismic Design Category E shall be designed in accordance with the International Building Code, except when the Seismic Design Category is reclassified to a lower Seismic Design Category in accordance with Section R301.2.2.1.

Exceptions: The following types of buildings or structures are exempt from the seismic requirements of this code:

1. Detached one-and two-family dwellings, townhomes and their accessory structures located in Seismic Design Categories A, B or C.

2. Those dwellings which conform to the standards and principles set forth in the "Home Builder's Guide to Seismic Resistant Construction" issued by the Federal Emergency Management Agency (FEMA) in FEMA 232 (June 2006), which is incorporated by reference.

3. Where exceptions to the required provisions for Seismic Design Categories D1, and D2 can be shown to be justified by implementing the provisions of the Kentucky Building Code, a rational analysis design in accordance to the International Building Code may be used, subject to the approval of the building official.

R301.2.2.1 Determination of seismic design category. Buildings shall be assigned a seismic design category in accordance with Table R301.2.2.1.

TABLE R301.2.2.1
SEISMIC DESIGN CATEGORIES-SITE CLASS D

COUNTY	SEISMIC DESIGN CATEGORY	COUNTY	SEISMIC DESIGN CATEGORY	COUNTY	SEISMIC DESIGN CATEGORY	COUNTY	SEISMIC DESIGN CATEGORY
Adair	B	Edmonson	B	Knox	B	Nicholas	B
Allen	B	Elliott	B	Larue	B	Ohio	C
Anderson	B	Estill	B	Laurel	B	Oldham	B
Ballard	D_2	Fayette	B	Lawrence	B	Owen	B
Barren	B	Fleming	B	Lee	B	Owsley	B
Bath	B	Floyd	B	Leslie	B	Pendleton	B
Bell	B	Franklin	B	Letcher	B	Perry	B
Boone	A	Fulton	D_2	Lewis	B	Pike	B
Bourbon	B	Gallatin	B	Lincoln	B	Powell	B
Boyd	B	Garrard	B	Livingston	D_1	Pulaski	B
Boyle	B	Grant	B	Logan	C	Robertson	B
Bracken	B	Graves	D_2	Lyon	D_0	Rockcastle	B
Breathitt	B	Grayson	C	Madison	B	Rowan	B
Breckinridge	C	Green	B	Magoffin	B	Russell	B
Bullitt	B	Greenup	B	Marion	B	Scott	B
Butler	C	Hancock	C	Marshall	D_1	Shelby	B
Caldwell	D_0	Hardin	B	Martin	B	Simpson	B
Calloway	D_1	Harlan	B	Mason	B	Spencer	B
Campbell	A	Harrison	B	McCracken	D_2	Taylor	B
Carlisle	D_2	Hart	B	McCreary	B	Todd	C
Carroll	B	Henderson	C	McLean	C	Trigg	D_0
Carter	B	Henry	B	Meade	B	Trimble	B
Casey	B	Hickman	D_2	Menifee	B	Union	D_0
Christian	C	Hopkins	C	Mercer	B	Warren	B
Clark	B	Jackson	B	Metcalfe	B	Washington	B
Clay	B	Jefferson	B	Monroe	B	Wayne	B
Clinton	B	Jessamine	B	Montgomery	B	Webster	C
Crittenden	D_0	Johnson	B	Morgan	B	Whitley	B
Cumberland	B	Kenton	A	Muhlenberg	C	Wolfe	B
Daviess	C	Knott	B	Nelson	B	Woodford	B

R301.2.2.1.1 Alternate determination of seismic design category. The seismic design categories and corresponding short period design spectral response accelerations, S_{DS} shown in Table R301.2.2.1 are based on soil Site Class D, as defined in Section 1613.3.2 of the *Kentucky Building Code*. If soil conditions are other than Site Class D, the short period design spectral response accelerations, S_{DS}, for a site can be determined according to Section 1613.3 of the *Kentucky Building Code*. The value of S_{DS} determined according to Section 1613.3 of the *Kentucky Building Code* is permitted to be used to set the seismic design category according to Table R301.2.2.1.1, and to interpolate between values in Tables R602.10.1.3~~(3)~~, R603.9.2(1) and other seismic design requirements of this code.

NOTE: SECTION R301.2.2.1.2 AS IT APPEARS IN THE 2012 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS IS HEREBY DELETED IN ITS ENTIRETY.

NOTE: SECTION R301.2.2.4 AS IT APPEARS IN THE 2012 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS IS HEREBY DELETED IN ITS ENTIRETY.

R301.2.2.2.5 Irregular buildings. Prescriptive construction as regulated by this code shall not be used for irregular structures located in Seismic design Categories D0, D1 and D2. Irregular portions of structures shall be designed in accordance with accepted engineering practice to the extent the irregular features affect the performance of the remaining structural system. When the forces associated with the irregularity are resisted by a structural system designed in accordance with accepted engineering practice, design of the remainder of the building shall be permitted using the provisions of this code. A building or portion of a building shall be considered to be irregular when one or more of the following conditions occur:

1. When shear wall lines or braced wall panels are not in one plane vertically from the foundation to the uppermost story in which they are required.

> **Exception:** For wood light-frame construction, floors with cantilevers, offsets, or setbacks not exceeding four times the nominal depth of wood floor joists are permitted to support braced wall panels that are out of plane with braced wall panels below provided that:
>
> 1. Floor joists are nominal 2 inches by 10 ~~shear wall or braced wall line provided~~ inches (51 mm by 254 mm) or larger and that: spaced not more than 16 inches (406 mm) on center.
> 2. The ratio of the back span to the designed cantilever is at least 2 to 1.
> 3. Floor joists at ends of braced wall panels are doubled.
> 4. For wood-frame construction, a continuous rim joist is connected to ends of all cantilever joists. When spliced, the rim joists shall be spliced using a galvanized metal tie not less than 0.58 inch (1.5mm) (16 gage) and 1 ½ inches (38mm) wide fastened with six 16d nails on each side of the splice or a block of the same size as the rim joist of sufficient length to fit securely between the joist space at which the splice occurs, fastened with eight 16d nails on each side of the splice; and
> 5. Gravity loads carried at the end of cantilevered joists are limited to uniform wall and roof loads and the reactions from headers having a span of 8 feet (2438mm) or less.

2 .When a section of floor or roof is not laterally supported by shear walls or *braced wall panels* on all edges.

Exceptions:

1.) Portions of floors that do not support shear walls or braced wall panels above, or roofs, shall be permitted to extend no more than 6 feet (1829 mm) beyond a shear wall or braced wall line.

2.) Portions of floors that do not support shear walls or braced wall panels above or roofs, shall be permitted to extend no more than 25 feet (7620mm) or two-thirds of the width of the cantilever portion, whichever is less, beyond a shear wall or braced wall line provide that:

> a. If a roof deck, the overhang is continuously braced by a wood truss designed for the lateral load effects of the overhang, or the shear walls or braced wall panels between the roof deck and ceiling. The bracing element shall be directly over the line of the lower braced wall system.
>
> b. All unsupported deck edges are continuously blocked and all edges are nailed with 8d common nails on not greater than 6" (152mm) on centers.
>
> c. A continuous double rim joist matching the dimensions of the joists, purlins or rafters is provided along the three open sides

3. When the end of a braced wall panel occurs over an opening in the wall below and ends at a horizontal distance greater than 1 foot (305 mm) from the edge of the opening. This provision is applicable to shear walls and braced wall panels offset in plane and to braced wall panels offset out of plane as permitted by the exception to item 1 above.

> **Exception:** For wood light-frame wall construction, one end of a braced wall panel shall be permitted to extend more than 1 foot (305 mm) over an opening not more than 8 feet (2438 mm) wide in the wall below provided that the opening includes a header in accordance with the following:
>
> 1. The building width, loading condition and framing member species limitations of Table R502.5(1) shall apply and
> 2. Not less than one 2x12 or two 2x10 for an opening not more than 4 feet (1219 mm) wide or
> 3. Not less than two 2x12 or three 2x10 for and opening not more than 8 feet (1829 mm) wide or
> 4. Not less than three 2 x 12 or four 2 x 10 for an opening not more than 8 feet (2438 mm) wide and
> 5. The entire length of the braced wall panel does not occur over an opening in the wall below.

4. When an opening in a floor or roof exceeds the lesser of 12 feet (3657 mm) or 50 percent of the least floor of roof dimension.

Exception: The opening is bounded by braced walls within four feet of the opening on all four sides and running the full height of the structure. The braced walls shall bear on continuous foundations walls or the basement slab.

5. When portions of a floor level are vertically offset.

Exceptions:
1. Framing supported directly by continuous foundations at the perimeter of the building.
2. For wood light-frame construction, floors shall be permitted to be vertically offset when the floor framing is lapped or tied together as required by Section R502.6.1.
3. The offset occurs at a braced wall system over continuous foundations or a basement slab.

6. When shear walls and braced wall lines do not occur in two perpendicular directions.

7. When stories above-grade partially or completely braced by wood wall framing in accordance with Section R602 or steel framing in accordance with Section R603 include masonry or concrete construction.

Exception: Fireplaces, chimneys and masonry veneer as permitted by this code. When this irregularity applies, the entire story shall be designed in accordance with accepted engineering practice.

8. Where only one side of the section is unbraced, the length perpendicular to the unbraced side shall not exceed 25 feet nor have a ratio to the unbraced dimension of 1 for a one-story structure or 0.67 for other structures, whichever is less, provided:

a) All unsupported deck edges within the section are continuously blocked and all edges are nailed with 8d common nails on not greater than 6" (152mm) on center.

b) A continuous rim joist matching the dimensions of the joists, purlins or rafters is provided along the unbraced side. On the other three sides, there shall be a continuous joist, rim joist or blocking directly over the braced walls.

SECTION R302
FIRE-RESISTANT CONSTRUCTION

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1).

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of *dwellings* and *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. For building applications that have received local zoning approvals for plats or for preliminary concept or master plans prior to July 1, 2007, dwellings with a *fire separation distance* of less than three (3) feet from the property line shall be required to have at least a one-hour fire resistance rating and exposure from both sides and openings shall not be permitted. Projections and penetrations shall comply with Table R302.1(1).
7. Minimum fire separation distances for exterior walls may be decreased to a minimum of three (3) feet from the property line if the exterior wall of the dwelling on the adjacent site is held by deed or other recorded land restriction at a distance from the property line which affords at least ten (10) feet between the exterior walls of the dwellings. Projections more than 12 inches beyond the exterior wall are prohibited.

NOTE: TABLE R302.1(1) AS IT APPEARS IN THE 2012 INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS HAS BEEN DELETED AND IS REPLACED WITH THE FOLLOWING:

Table R302.1(1)
Exterior Walls

Exterior Wall Element		**Minimum Fire-Resistance Rating**	**Minimum Fire Separation distance**
Walls	Fire-resistance rated	1 hour – tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	< 5 feet
	Non fire-resistance rated	0 hours	≥ 5 feet
Projections	Fire-resistance rated	1 layer 5/8 type exterior sheetrock or other approved material on the underside	≥ 2 feet to < ~~5~~ 4 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings	Not allowed	N/A	< 3 feet
	25% maximum of wall area[a]	0 hours	< 5 feet to > 3 feet
	Unlimited	0 hours	> 5 feet
Penetrations	All	Comply with Section R302.4	< 5 feet
		None required	> 5 feet
	25% maximum of wall area[a]	0 Hours	< 5 feet to > 3 feet

a. Shall be the aggregate of Openings and Penetrations in walls that are > 3 feet and < 5 feet to a property line.

R302.1.1 Continuity. The fire-resistance rated wall shall be continuous from the foundation to the underside of the roof sheathing, deck or slab, and shall extend the full length of the wall or assembly, to a point where the fire separation distance no longer would require a fire-resistance rating of the exterior wall.

R302.1.2 Parapets. Parapets shall be constructed on exterior walls of buildings in accordance with Section R302.2.3 and R302.3.

Exceptions. A parapet need not be provided on an exterior wall where any of the following conditions exist:

1. The wall is not required to be fire-resistance rated in accordance with Table R302.1(1).
2. When the entire building is provided with a Class C roof covering, the exterior walls shall be permitted to terminate at the underside of the roof sheathing or deck provided:

   2.1. The roof sheathing or deck is constructed of approved noncombustible materials or of fire retardant-treated wood for a distance of 4 feet (1220mm); or

   2.2. The roof is protected with one layer of 5/8 (15.9mm) Type X gypsum board directly beneath the roof sheathing or deck, supported by a minimum of nominal 2-inch (51mm) ledgers attached to the sides of the roof framing members for a minimum distance of 4 feet (1220mm).

3. Where the exterior wall is permitted to have a maximum of 25% unprotected openings based on fire separation distance based on Table R302.1(1).

R302.2 Townhouses. Each *townhouse* shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exception: A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with NFPA 70. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and the residence shall be equipped with solid wood doors not less than 1 3/8 inches (35mm) in thickness, solid or honey-comb-core steel doors not less than 1 3/8 inches (35mm) thick, or 20-minute fire-rated doors.

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue. Every sleeping room shall have at least one operable emergency and rescue opening. Where *basements* contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening an is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

NOTE: THE EXCEPTION WHICH APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

SECTION R311
MEANS OF EGRESS

R311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall not be more than 1 ½ inches (38mm) lower than the top of the threshold.

Exception: the landing or floor on the exterior side shall not be more than 8 ¼ inches (210mm) below the top of the threshold provided the door does not swing over the landing or floor.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 8 ¼ inches (210mm) below the top of the threshold.

Exception: Other than the required exit door, where the vertical elevation measured between the interior finish floor and the exterior finish grade, patio or deck does not exceed 30 inches, a landing is not required for the exterior side of the door provided the door, other than an exterior storm or screen door, does not swing over the stairway.

NOTE: THE EXCEPTION WHICH APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

R311.4 Vertical egress. Egress from habitable levels shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.7.5.1 Risers. The maximum riser height shall be 8 ¼ inches (210 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted provided that the opening between the treads does not permit the passage of a 4-inch (102mm) diameter sphere.

Exception: The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762mm) or less.

R311.7.5.2 Treads. The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R311.7.5.2.1 Winder **treads.** Winder treads shall have a minimum tread depth of 9 inches (229 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a minimum tread depth of 6 inches at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than 3/8 inch (9.5mm). Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within 3/8 inch

(9.5mm) of the rectangular tread depth.

R311.7.8.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 ½ inch (38) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.
3. Handrails within a dwelling unit shall be permitted to be discontinuous between the top and bottom of a flight of stairs where the ends of the discontinued rail are returned to a wall or post and the maximum distance between the ends of discontinued rails is not greater than 4 inches (102 mm).

R311.7.8.3 Grip-size. All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 ¼ inches (32 mm) and not greater than 2 5/8 inches (67 mm). Other handrail shapes, including those complying with Figure R311.7 (a-f) are considered to be equivalent in graspability. If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 ¼ inches (160 mm) with a maximum cross section of dimension of 2 ¼ inches (57 mm).

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 at least 5/16 inch (8 mm) with 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 1 ¾ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 ¾ inches (32 mm) to a maximum of 2 ¾ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

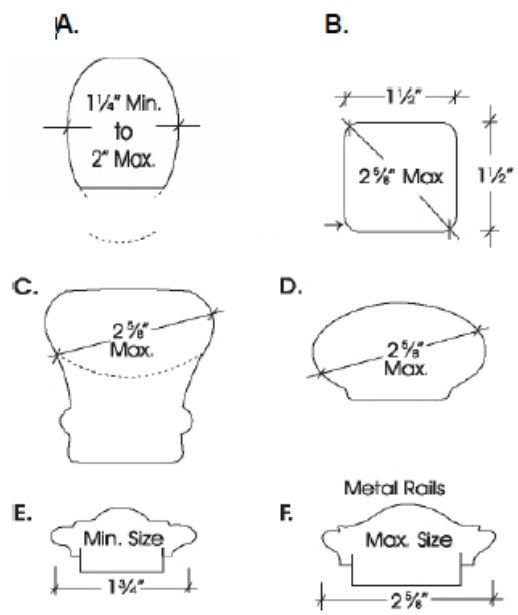


Figure 311. 7

For SI: 1 inch =25.4 mm; 1 degree = 0.018 rad

SECTION R312
GUARDS AND WINDOW FALL PROTECTION

NOTE: THE FOLLOWING SECTION AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

R312.2 Guards at retaining walls. Where retaining walls with differences in grade level on either side of the wall is in excess of 30 inches and are located closer than 3 feet to a

walk, designated walking path or driveway on the high side, such retaining wall shall be provided with guards that are constructed in accordance with Section R312.1.2 and R312.1.3

NOTE: SUBSECTIONS 312.2.1 WINDOW SILLS AND 312.2.2 WINDOW OPENING CONTROL DEVICES AS THEY APPEAR IN THE 2012 IRC ARE HEREBY DELETED IN THEIR ENTIRETY.

NOTE: SECTION 313 AUTOMATIC FIRE SPRINKLER SYSTEMS AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

SECTION R314
SMOKE ALARMS

R314.2 Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms in the event the system is not connected to a central station.

SECTION R315
CARBON MONOXIDE ALARMS

315.3 Where required in existing dwellings. Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, the permitting authority shall inform the owner/occupant that carbon monoxide alarms shall be provided in accordance with Section R315.1.

SECTION R324
POST AND FRAME STRUCTURES

R324.1 Post and frame structures. The following requirements serve as minimum standards for post and frame structures within all of the following structural limitations:

1. Residential accessory structures
2. Single story
3. Metal roof on purlins with bracing and metal wall panels on girts, with bracing as shown in Figure R324.1 or in lieu of bracing provide solid exterior structural sheathing
4. No attic storage
5. Maximum building width of 48 feet including the overhang
6. Maximum wall height of 16 feet
7. Maximum mean roof height of 20 feet
8. Maximum post spacing of 8 feet

Post and frame structures and portions thereof outside the above structural limitations of this standard shall be accompanied by structural calculations as required by the residential building official or designed under the provisions of section R106.1 of the Kentucky Residential Code (KRC). Post and frame structure shall comply with the structural design requirements of Section R301 of the KRC.

R324.2 Definition. Post and frame structures consist of primary members (post, beams and single span trusses or ceiling joists and rafters) and secondary members (roof purlins, wall girts, bracing and sheathing) where all loads are transmitted from the sheathing and the secondary members to the primary members which transfer them to the ground through vertical posts bearing on footings embedded in the soil. See Figure R324.1.

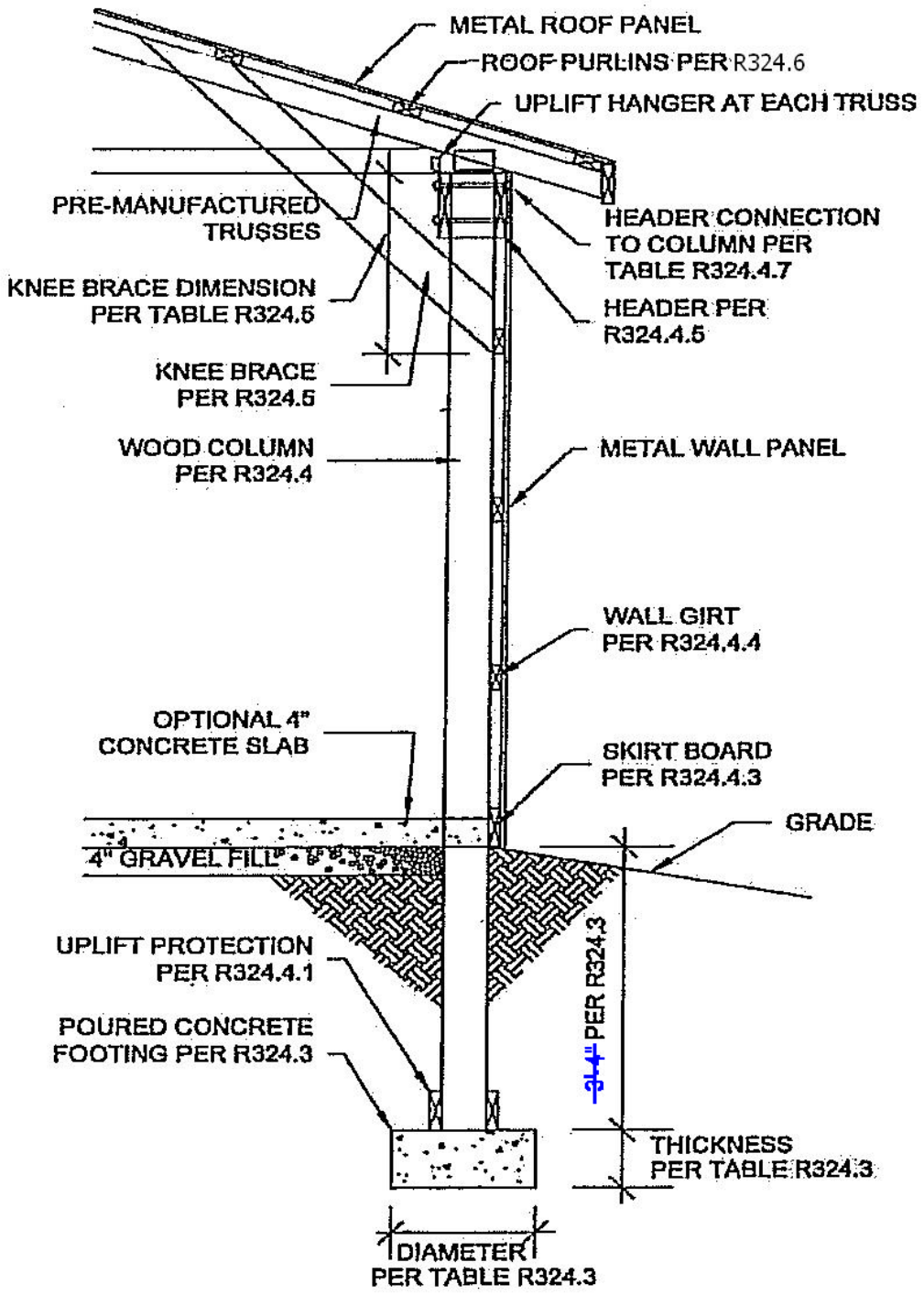


Figure R324.1
Post and Frame Wall Section
No Scale

Bracing not shown

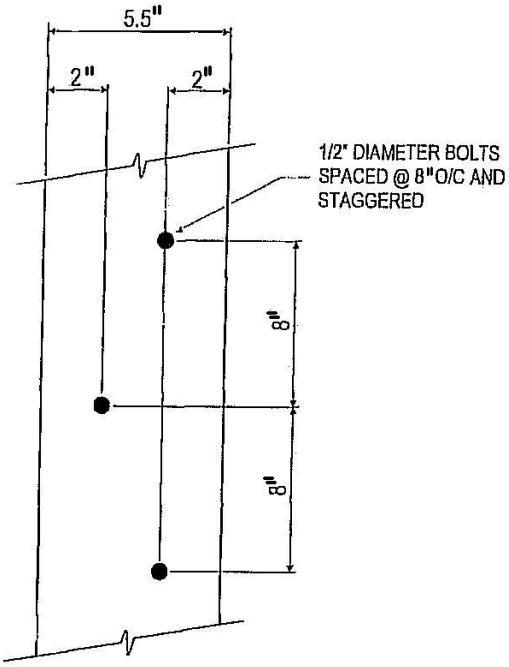
R324.3 Footings and Foundations. Footings and foundations shall comply with applicable provisions of R401. Post and frame structures shall have poured in-place concrete footings installed below all posts. The top of the footing shall be a minimum of 48 inches below finished grade and have footing diameters complying with Table R324.3.

TABLE R324.3 POST FRAME PIER DIAMETERS ~~1 2 3~~

Building width (length of truss) including overhang (feet)							
	25	28	32	36	40	44	48
Diameter (inches) 20 lb. Roof Snow Load	18	22	24	26	28	28	30
Diameter (inches) 30 lb. Roof Snow Load	24	26	28	28	30	30	32

1. Pier footing thickness shall be a minimum one-half of the diameter of the footing.
2. Based upon 2000 PSF soil bearing capacity and truss loads of 20 or 30 PSF live or snow load top chord, 10 PSF dead load top chord, 5 PSF dead load on the bottom chord and no live load on the bottom chord.
3. Fractional widths shall be rounded to the next higher pier footing diameter.

R324.4 Column and wall construction. Columns shall be three sections of 4-ply unspliced, reinforced spliced or solid wood and shall not be less than 6 inch by 6 inch nominal size. Columns shall comply with the requirements of Section R318 and shall be restrained to prevent lateral displacement. Built up columns shall be fastened as illustrated in Figure R324.2.



BUILT UP COLUMN FASTENING DETAIL

Figure 324.2

R324.4.1 Column uplift protection. Columns shall have uplift protection by one of the following methods:

1. Two 2x6 12 inch column uplift protection blocks attached to each side of the base of the column. The column uplift protection blocks must be placed horizontally, attached per Table R324.7 and comply with Section R318.

2. 12 inch high, concrete collar poured on top of footing around the post with 2 #5x9 inch rebar placed through the post at 3 inches and 9 inches from bottom of post in opposite directions. The rebar ends shall be installed in accordance with ACI 332 for the specified distance in inches from contact with the soil. See Figure R324.3

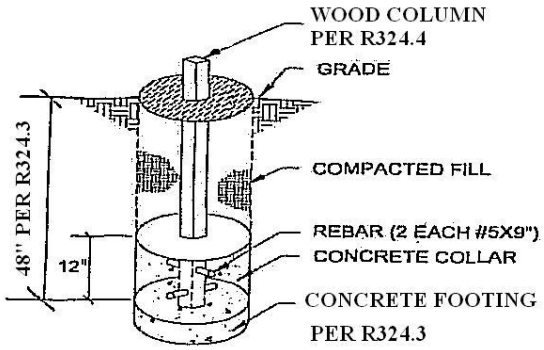


Figure R324.3
Column Uplift Protection Exception
No Scale

R324.4.2 Column spacing. The maximum spacing for columns shall be 8 feet.

R324.4.3 Skirt boards. Skirt boards shall be treated lumber meeting the requirements of Section R318 and attached per Table R324.7.

R324.4.4 Wall girts. Girts shall be a minimum 2x4 spaced not more than 24 inches on center and attached per Table R324.7.

R324.4.5 Load bearing beams and headers. Load bearing beams and headers shall comply with Table R502.5(1).

Exceptions:

1. Bearing beams are not required if the trusses or ceiling joists and rafters bear directly on the columns.
2. Opening on the gable end walls of post and frame buildings supporting a door or roof total load not exceeding 5 square feet per lineal feet of wall area, headers must be sized per Table R324.4.5.
3.

TABLE R324.4.5 GABLE END HEADER SIZES

Opening Width (feet)	10	12	16
Header Size (inches)	2 - 2x8	2 - 2x10	2 – 2x12

R324.4.6 Exterior Structural Sheathing or Wall Bracing. Provide exterior structural sheathing or wall bracing to resist all racking and shear forces. Bracing must comply with the applicable provisions of section R602.10 or by installing 2x6 diagonal braces between two adjoining columns at 8 feet on center or multiple spacing totaling a minimum of 8 feet on center where the post spacing design is less than 8 feet on center. The diagonal brace shall be placed from the top header or girt to the next adjoining column at the skirt board. The bracing shall be ~~placed~~ installed on each side of the building and shall be a minimum of 25 feet on center and within 12 feet of the end of the building and attached to the wall girts and columns per Table R324.7. Any splices of the diagonal brace required due to excessive length, must lap over two consecutive wall girts.

R324.4.7 Beams supporting trusses or rafters and ceiling joists attachment to column. Bearing beams supporting roof trusses or rafters and ceiling joists shall be connected to columns by one of the following methods:

1. Bolts that are 1/2 inch diameter through-bolted to the side of the column;
2. Bolts that are 1/2 inch diameter, directly attached to a 3-ply column notch, enclosing the truss or rafter at the top of column; or
3. Other fasteners with minimum shear or withdraw values stated in Table R324.4.7.

R324.4.7.1 Number of fasteners. The minimum numbers of through bolts or the fasteners with minimum shears or withdraw values required per Table R324.4.7.

TABLE R324.4.7 BEAM OR TRUSS CONNECTION AT COLUMNS MINIMUM FASTENERS OR TOTAL SHEAR OR WITHDRAW VALUES ~~1 2 3~~

Building width (length of truss) including overhang (feet)							
	24	28	32	36	40	44	48
Shear or withdraw (pounds) 20# snow load	3360	3920	4480	5040	5600	6160	6720
Number of Bolts 20# roof snow load	2	2	2	3	3	3	3
Shear or withdraw (pounds) 30# roof snow load	4320	5040	5760	6480	7200	7920	8640
Number of Bolts 30# roof snow load	2	3	3	3	3	3	3

1. Based upon truss loads of 20 or 30 PSF live or snow load top chord, 10 PSF dead load top chord, 5 PSF live load on the bottom chord and no live load on the bottom chord.
2. Based upon post spacing at intervals not exceeding 8 feet.

3. When beams are attached at each side of the column and fasteners do not extend through both beams such as though-bolts, the required values are one-half the amount shown above for each beam.

R324.5 Knee bracing. A 2x6 brace shall extend from the column to the top chord of the truss or rafter adjacent to the post at a 45 degree angle. The vertical distance down from the bottom chord of the truss or ceiling joist to the point where the brace attaches to the post shall be in compliance with Table R324.5 as shown on Figure R324.1. Trusses or rafter must be spaced such that they align with the column intervals. Attachment of knee brace shall be per Table R324.7.

TABLE R324.5 KNEE BRACE VERTICAL DISTANCE

Wall Height	Vertical Dimension
8'-0" and 9'-0"	1'-6"
10'-0" and 11'-0"	2'-0"
12'-0" and 13'-0"	3'-0"
14'-0" through 16'-0"	4'-0"

R324.6 Roof Construction. Top chord of roof trusses or roof rafters shall be braced with exterior sheathing or metal roof on purlins with bracing.

R324.6.1 Roof Purlins. Roof purlins shall be a minimum of 4x2 SPF #2 laid flat of spans up to 4 feet, and 4x2 SPF #2 laid on edge for spans up to 8 feet.

R324.6.2 Roof Bracing. Provide exterior structural sheathing or bracing to resist racking and shearing forces in roof Bracing shall occur in the roof on all 4 sides of the building and shall consist of 2x6 diagonal braces perpendicular and parallel to rafters or trusses and attached to the bottom side of rafters or top chords of trusses. These braces shall start at a point just below the first purlin, rafter or truss in from the eave purlin and at each corner column. The brace shall be placed on a 45 degree angle and end below the location of a purlin, rafter or truss within 8'-0" in from the wall. If the building width or length exceeds 24'-0" then install additional braces in the same manner. Spacing of braces shall not exceed a maximum spacing of 2 feet on center in any direction.

R324.7 Attachment details. Structural fastener details for post and frame buildings shall comply with Table R324.7.

TABLE R324.7 FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

Fastener Schedule for Structural Members		
Description of Building Element	**Number and Type of Fastener**	**Attachment Type**
Uplift blocking to column	5 – 16d Hot Dipped Galvanized	Each block
Skirt board to column	2 – 16d Hot Dipped Galvanized	Face nail
Wall girt to column	2 – 16d Hot Dipped Galvanized	Face nail
Diagonal bracing to column	2 – 16d Hot Dipped Galvanized	Toe nail
Diagonal bracing to skirt board	2 – 16d Hot Dipped Galvanized	Face nail
Diagonal bracing to wall girts	2 – 10d Hot Dipped Galvanized	Face nail

Knee brace to column	2 – 10d	Face nail
Knee brace to top chord of truss or rafter	3 – 16d Hot Dipped Galvanized	Face nail
Knee brace to bottom chord of truss or ceiling joist	3 – 10d	Face nail
Roof purlin to truss or rafter with span of 2’ or 4’	2 – 16d	Face nail
Roof purlin to truss or rafter with span of 8’	Mechanical fastener with uplift protection greater than 225 lbs	Per manufacturer

CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.1 Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in areas prone to flooding as established by local jurisdiction shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA PWF.

Exception: The provisions of this chapter shall be permitted to be used for wood foundations only in the following situations:

1. In building that have no more than two floors and a roof.
2. When interior basement and foundation wall are constructed at intervals not exceeding 50 feet (15240 mm).
3. Wood foundations in Seismic Design Category D_0, D_1 or D_2 shall be designed in accordance with accepted engineering practice.

R401.4.1 Geotechnical evaluation. In lieu of a complete geotechnical evaluation, the load-bearing values in Table R401.4.1 shall be assumed.

TABLE R401.4.1 PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS[a]

CLASS OF MATERIAL	LOAD-BEARING PRESSURE (pounds per square foot)
Crystalline bedrock	12,000
Sedimentary and foliated rock	4,000
Sandy gravel and/or gravel (GW and GP)	3,000
Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM and GC)	2,000
Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH and CH)	1,500[bc]

For SI: 1 pound per square foot = 0.0479 kPa.

a. When soil tests are required by Section R401.4, the allowable bearing capacities of the soil shall be part of the recommendations.

b. Where the building official determines that in-place soils with an allowable bearing capacity of less than 1,500 psf are likely to be present at the site, the allowable bearing capacity shall be determined by a soils investigation.

c. 2000 psf presumptive load-bearing value shall be used for Boone, Campbell and Kenton counties for CL and CH soils only.

SECTION R403
FOOTINGS

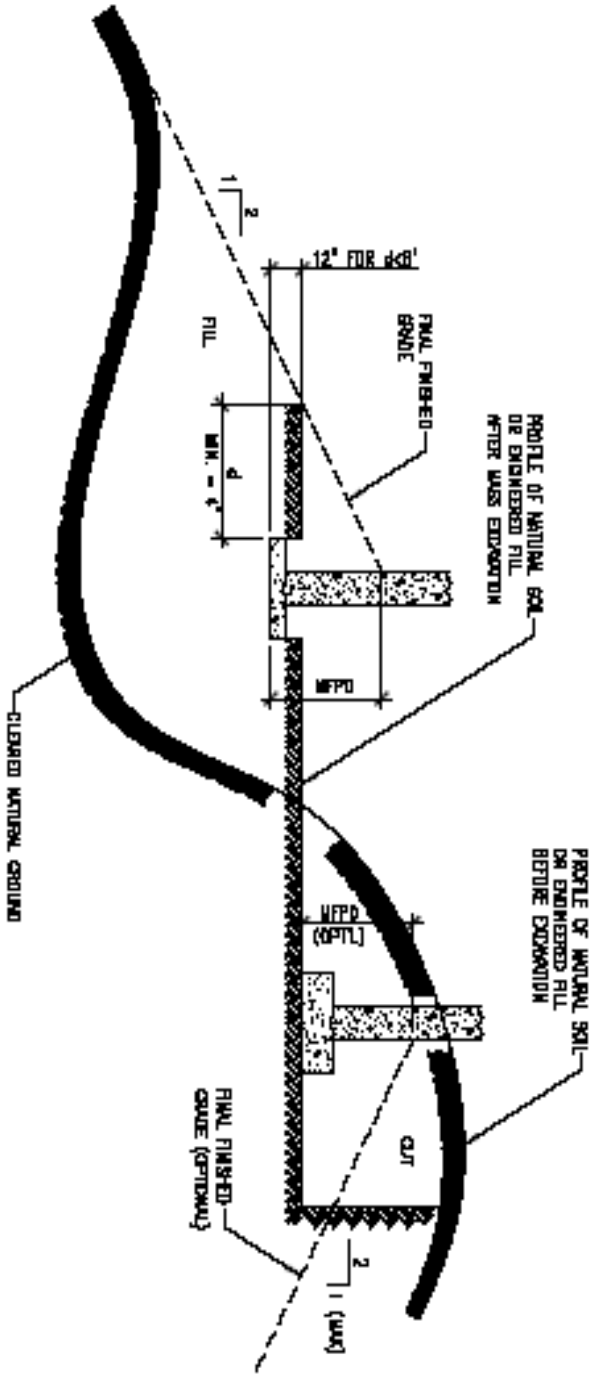
R403.1.4 Minimum depth. The minimum depth of all exterior footings and foundation wall systems shall extend not less than the minimum frost-protection depths (MFPD) specified in Table R403.1.4 and Figure R403.1.4. The minimum frost depth shall be measured from the proposed finished grade to the bottom of the footing. All site fills shall be prepared in accordance with the requirements of Section R401.2. The minimum frost-protection depths specified in Table R403.1.4 may be achieved by backfilling with non-compacted soil above the base of the footing to a depth equal to or greater than the required frost depth plus an additional 4 inches (102 mm). The maximum grade slope for frost protection shall not exceed 2 to 1 and the minimum grade slope shall comply with the drainage requirements of Section R401.3.

Footing and foundation systems may be formed on top of the finished prepared site grade of the cut side of the excavation when the excavation cut exceeds 28 inches (711 mm) and the MFPD may be achieved by backfilling the cut slope.

The “finished prepared site grade” shall be defined as the area exposed after clearing, grubbing, topsoil removal, and grading of the building pad, exposing stable ground.

If solid rock is exposed during the preparation of the finished prepared site grade then the footing and foundation systems may bear on the solid rock and shall not be required to extend below the frost line specified in Table R403.1.4.

County	Frost Depth d_f (in)	County	Frost Depth d_f (in)	County	Frost Depth d_f (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	**All other KY Counties**	24
Harlan	30	Letcher	33		



MFPD – MINIMUM FROST PROTECTION DEPTH
FIGURE R403.1.4

SECTION R404
FOUNDATIONS AND RETAINING WALLS

R404.1.2 Concrete foundation walls. Concrete foundation walls that support light-frame walls shall be designed and constructed in accordance with the provisions of this section, ACI 318, ACI 332 or PCA 100. Concrete foundation walls that support above-grade concrete walls that are within the applicability limits of Section R611.2 shall be designed and constructed in accordance with the provision of this section, ACI 318, ACI 332 or PCA 100. Concrete foundation walls that support above-grade concrete walls that are not within the applicability limits of Section R611.2 shall be designed and constructed in accordance with the provisions of ACI 318, ACI 332 or PCA 100. When ACI 318, ACI 332 or PCA 100 or the provisions of this section are used to design concrete foundation walls, project drawings, typical details and specifications are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the *jurisdiction* having authority. Concrete foundation walls with a brick drop stem wall and located within Jefferson, Bullitt, Oldham, Spencer and Shelby counties which are known to have soil with sufficient

stiffness, shall be permitted to comply with Figure R404.1.5(2). In seismic Design Categories D0, D1 and D2, concrete foundation walls shall also comply with Section R404.1.4.

TABLE R404.1.2(8) MINIMUM VERTICAL REINFORCEMENT FOR 6-, 8-, 10-INCH AND 12-INCH NOMINAL FLAT BASEMENT WALLS[b, c, d, e, f, h, i, k, n]

MAXIMUM WALL HEIGHT (feet)	MAXIMUM UNBALANCED BACKFILL HEIGHT[g] (feet)	MINIMUM VERTICAL REINFORCEMENT-BAR SIZE AND SPACING (inches)											
		Soil classes[a] and design lateral soil (psf per foot of depth)											
		GW, GP, SW, SP 30				GM, GC, SM, SM-SC and ML 45				SC, ML-CL and inorganic CL 60			
		Minimum nominal wall thickness (inches)											
		6	8	10	12	6	8	10	12	6	8	10	12
5	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
6	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR[l]	NR	NR	4 @ 35	NRl	NR	NR
	6	NR	NR	NR	NR	5 @ 48	NR	NR	NR	5 @ 36	NR	NR	NR
7	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	NR	NR	NR	NR	5 @ 47	NR	NR	NR
	6	NR	NR	NR	NR	5 @ 42	NR	NR	NR	6 @ 43	5 @ 48	NR[l]	NR
	7	5 @ 46	NR	NR	NR	6 @ 42	5 @ 46	NR[l]	NR	6 @ 34	6 @ 48	NR	NR
8	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	4 @ 38	NR[l]	NR	NR	5 @ 43	NR	NR	NR
	6	4 @ 37	NR[l]	NR	NR	5 @ 37	NR	NR	NR	6 @ 37	5 @ 43	NRl	NR
	7	5 @ 40	NR	NR	NR	6 @ 37	5 @ 41[o]	NRl	NR	6 @ 34	6 @ 43	NR	NR
	8	6 @ 43	5 @ 47	NR[l]	NR	6 @ 34	6 @ 43	NR	NR	6 @ 27	6 @ 32	6 @ 44	NR
9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	4 @ 35	NR[l]	NR	NR	5 @ 40	NR	NR	NR
	6	4 @ 34	NR[l]	NR	NR	6 @ 48	NR	NR	NR	6 @ 36	6 @ 39	NR[l]	NR
	7	5 @ 36	NR	NR	NR	6 @ 34	5 @ 37	NR	NR	6 @ 33	6 @ 38	5 @ 37	NR[l]
	8	6 @ 38	5 @ 41	NR[l]	NR	6 @ 33	6 @ 38	5 @ 37[p]	NR[l]	6 @ 24	6 @ 29	6 @ 39	4 @ 48[m]
	9	6 @ 34	6 @ 46	NR	NR	6 @ 26	6 @ 30	6 @ 41	NR	6 @ 19	6 @ 23	6 @ 30	6 @ 39
10	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	5	NR	NR	NR	NR	4 @ 33	NR[l]	NR	NR	5 @ 38	NR	NR	NR

	6	5 @ 48	NR[l]	NR	NR	6 @ 45	NR	NR	NR	6 @ 34	5 @ 37	NR	NR
	7	6 @ 47	NR	NR	NR	6 @ 34	6 @ 48	NR	NR	6 @ 30	6 @ 35	6 @ 48	NR[l]
	8	6 @ 34	5 @ 38	NR	NR	6 @ 30	6 @ 34	6 @ 47	NR[l]	6 @ 22	6 @ 26	6 @ 35	6 @ 45[m]
	9	6 @ 34	6 @ 41	4 @ 48	NR[l]	6 @ 23	6 @ 27	6 @ 35	4 @ 48[m]	DR	6 @ 22	6 @ 27	6 @ 34
	10	6 @ 28	6 @ 33	6 @ 45	NR	DR[j]	6 @ 23	6 @ 29	6 @ 38	DR	6 @ 22	6 @ 22	6 @ 28

For SI: 1 foot = 304.8 mm; 1 inch = 25.4 mm; 1 pound per square foot per foot = 0.1571 kPa^2/m, 1 pound per square inch = 6.895 kPa.

NR = Not required.

a. Soil classes are in accordance with the Unified Soil Classification System. Refer to Table R405.1.

b. Table values are based on reinforcing bars with a minimum yield strength of 60,000 psi.

c. Vertical reinforcement with a yield strength of less than 60,000 psi and/or bars of a different size than specified in the table are permitted in accordance with Section R404.1.2.3.7.6 and Table R404.1.2(9).

d. NR indicates no vertical wall reinforcement is required, except for 6-inch nominal walls formed with stay-in-place forming systems in which case vertical reinforcement shall be #4@48 inches on center.

e. Allowable deflection criterion is *L*/240, where *L* is the unsupported height of the basement wall in inches.

f. Interpolation is not permitted.

g. Where walls will retain 4 feet or more of unbalanced backfill, they shall be laterally supported at the top and bottom before backfilling.

h. Vertical reinforcement shall be located to provide a cover of 1.25 inches measured from the inside face of the wall. The center of the steel shall not vary from the specified location by more than the greater of 10 percent of the wall thickness or $^3/_8$-inch.

i. Concrete cover for reinforcement measured from the inside face of the wall shall not be less than $^3/_4$-inch. Concrete cover for reinforcement measured from the outside face of the wall shall not be less than $1^1/_2$ inches for No. 5 bars and smaller, and not less than 2 inches for larger bars.

j. DR means design is required in accordance with the applicable building code, or where there is no code in accordance with ACI 318.

k. Concrete shall have a specified compressive strength, f'_c, of not less than 2,500 psi at 28 days, unless a higher strength is required by footnote l or m.

l. The minimum thickness is permitted to be reduced 2 inches, provided the minimum specified compressive strength of concrete, f'_c, is 4,000 psi.

m. A plain concrete wall with a minimum nominal thickness of 12 inches is permitted, provided minimum specified compressive strength of concrete, f'_c, is 3,500 psi.

n. See Table R611.3 for tolerance from nominal thickness permitted for flat walls.

o. For a minimum 8 inch thick concrete wall with a minimum specified strength of concrete f ′c of 3000 psi, no wall reinforcement is required.

p. For a minimum 10 inch thick concrete wall with a minimum specified strength of concrete f ′c of 3000 psi, no wall reinforcement is required.

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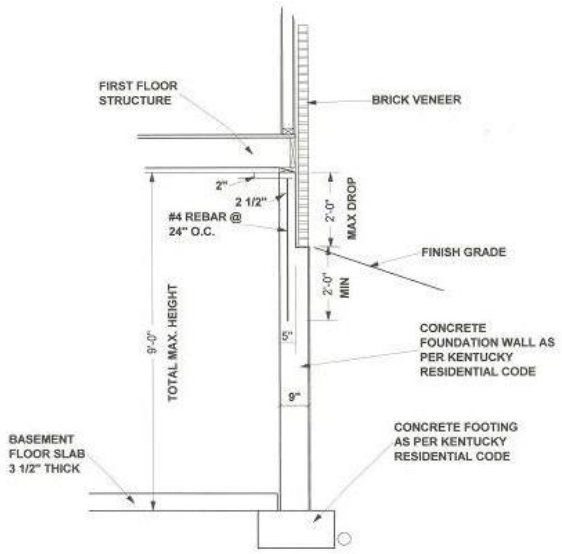
R404.1.5.2 Concrete wall thickness. The thickness of concrete foundation walls shall be equal to or greater than the thickness of the wall in the *story* above. Concrete foundation walls with corbels, brackets or other projections built into the wall for support of masonry veneer or other purposes are not within the scope of the tables in this section.

Where a concrete foundation wall is reduced in thickness to provide a shelf for the support of masonry veneer, the reduced thickness shall be equal to or greater than the thickness of the wall in the *story* above. Vertical reinforcement for the foundation wall shall be based on Table R404.1.2(8) and located in the wall as required by Section R404.1.2.3.7.2 where that table is used. Vertical reinforcement shall be based on the thickness of the thinner portion of the wall.

Exceptions:

1. Where the height of the reduced thickness portion measured to the underside of the floor assembly or sill plate above is less than or equal to 24 inches (610 mm) and the reduction in thickness does not exceed 4 inches (102 mm), the vertical reinforcement is permitted to be based on the thicker portion of the wall.

2. Concrete foundation walls with a brick drop stem wall and located within Jefferson, Bullitt, Oldham, Spencer and Shelby counties which are known to have soil with sufficient stiffness, shall be permitted to comply with Figure R404.1.5. In seismic Design Categories D0, D1 and D2, concrete foundation walls shall also comply with Section R404.1.4.



ALTERNATE FOUNDATION WALL/BRICK DROP SECTION

Figure R 404.1.5 (2)

R404.1.9.2 Masonry piers supporting floor girders. Masonry piers supporting wood girders sized in accordance with Tables R502.5(1) and R502.5(2) shall be permitted in accordance with this section. Piers supporting girders for interior bearing walls shall have a minimum nominal dimension of 12 inches (305 mm) and a maximum height of 10 feet (3048 mm) from top of footing to bottom of sill plate or girder. Piers supporting girders for exterior bearing walls shall have a minimum nominal dimension of 12 inches (305 mm) and a maximum height of 4 feet (1220 mm) from top of footing to bottom of sill plate or girder. Girders and sill plates shall be anch0ored to the pier or footing in accordance with Section R403.1.6 or Figure R404.1.5 (1). Floor girder bearing shall be in accordance with Section R502.6.

> **Exception:** Interior piers shall not be required to be anchored to girders unless required by an engineered design.

CHAPTER 5
FLOORS

SECTION R502
WOOD FLOOR FRAMING

R502.6 Bearing. The ends of each joist, beam or girder shall have not less than 1.5 inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) on masonry or concrete except where supported on a 1-inch by 4-inch (25.4 mm by 102 mm) ribbon strip and nailed to the adjacent stud or by the use of approved joist hangers. The bearing on masonry or concrete shall be direct, or a sill plate of 2-inch-minimum (51 mm) nominal thickness shall be provided under the joist, beam or girder. The sill plate shall provide a minimum nominal bearing area of 48 square inches (30 865 square mm). A shim of metal or 1-inch nominal hardwood shall be acceptable to fill the void between joist, beam or girder and sill plate.

Steel columns, posts, and beams must be erected and installed according to manufacturer's instructions (if applicable). Unless otherwise listed and approved for specific use, nail/ram gun applications are prohibited in the installation of steel columns, posts, and beams (flanges and right angle clips) in residential construction. Anchors of proper size and strength (no less than ½" or according to the manufacturer's instructions) must be used and installed for the correct number of holes in each base plate or clip. All clips and column or post plates must be welded to the beam(s) by a weld in accordance with AISC 360 across the full width of two or more sides, or secured with at least two, ½ inch diameter bolts for columns or posts weighting 300 pounds or less, and four 1/2 inch diameter bolts for all other cases.

R502.9 Fastening. Floor framing shall be nailed in accordance with Table R602.3(1). Where post and beam or girders construction is used to support framing, positive connections shall be provided to ensure against uplift and lateral displacement. The fastening of steel columns, posts, and beams shall be in accordance with the manufacturers installation instructions or in accordance with Table R602.3(1).

SECTION R507
DECKS

NOTE: SECTIONS R507.2.1 THROUGH 507.2.3 AS THEY APPEAR IN THE 2012 IRC ARE HEREBY DELETED IN THEIR ENTIRETY AND REPLACED WITH THE FOLLOWING:

R507.2.1 Placement of lag screws or bolts in deck ledgers. The lag screws or bolts shall be placed 2 inches (51mm) in from the bottom or top of the deck ledgers and between 2 and 5 inches (51 and 127 mm) in from the ends. The lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger.

R507.2.2 Alternate deck ledger connections. Deck ledger connections not conforming to Table R507.2 shall be designed in accordance with accepted engineering practice. Girders supporting deck joists shall not be supported on deck ledgers or band joists. Deck ledgers shall not be supported on stone or masonry veneer unless specifically designed by a design professional.

CHAPTER 6
WALL CONSTRUCTION

SECTION R602
WOOD WALL FRAMING

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a,b,c]	SPACING OF FASTENERS
	Roof		
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 ½" x 0.113")	–
2	Ceiling joists to plate, toe nail	3-8d (2 ½" x 0.113")	–
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	–
4	Collar tie to rafter, face nail or 1 ¼" x 20 gage ridge strap	3-10d (3" x 0.128")	–
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3 ½" x 0.135") or 3-10d common nails (3" x 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss[j]
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 ½" x 0.135") 3-16d (3 ½" x 0.135")	–
	Wall		
7	Built-up studs-face nail	10d (3" x 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 ½" x 0.135")	12" o.c.
9	Built-up header, two-pieces with ½" spacer	16d (3 ½" x 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 ½" x 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 ½" x 0.113")	–
12	Double studs, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 ½" x 0.135")	–
15	Sole plate to joist or blocking, face nail	16d (3 ½" x 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3 ½" x 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2 ½" x 0.113") or 2-16d (3 ½" x 0.135")	– –
18	Top or sole plate to stud, end nail	2-16d (3 ½" x 0.135")	–
19	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	–
20	1" brace to each stud and plate, face nail	2-8d (2 ½" x 0.113") 2 staples 1 ¾"	– –

21	1“ x 6” sheathing to each bearing, face nail	2-8d (2 ½” x 0.113”) 2 staples 1 ¾”	– –
22	1“ x 8” sheathing to each bearing, face nail	2-8d (2 ½” x 0.113”) 3 staples 1 ¾”	– –
23	Wider than 1“ x 8” sheathing to each bearing, face nail	3-8d (2 ½” x 0.113”) 4 staples 1 ¾”	– –
Floor			
24	Joist to sill or girder, toe nail	3-8d (2 ½” x 0.113”)	–
25	Rim joist to top plate, toe nail (roof applications also)	8d (2 ½” x 0.113”)	6” o.c.
26	Rim joist or blocking to sill plate, tow nail	8d (2 ½” x 0.113”)	6” o.c.
27	1“ x 6 subfloor or less to each joist, face nail	2-8d (2 ½” x 0.113”) 2 staples 1 ¾”	– –
28	2” subfloor to joist or girder, blind and face nail	2-16d (3 ½” x 0.135”)	–
29	2” planks (plank & beam – floor & roof)	2-16d (3 ½” x 0.135”)	at each bearing
30	Built-up girders and beams, 2-inch lumber layers	10d (3” x 0.128”)	Nail each layer as follows: 32” o.c. at top and bottom and staggered. Two nails at end and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3 ½” x 0.135”)	At each joist or rafter

TABLE R602.3(1)—continued

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER[b,c,e]	SPACING OF FASTENERS	
			Edges (inches)[i]	Intermediate supports[c,e]
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
32	3/8” – ½”	6d common (2” x 0.113”) nail (subfloor wall)[j] 8d common (2 ½” x 0.131”) nail (roof)[f]	6	12[g]
33	19/32” – 1”	8d common nail (2 ½” x 0.131”)	6	12[g]
34	1 1/8” – 1 ¼”	10d common (3” x 0.148”) nail or 8d (2 ½” x 0.131”) deformed nail	6	12
Other wall sheathing[h]				
35	½” structural cellulosic fiberboard sheathing	½” galvanized roofing nail, 7/16” crown or 1” crown staple 16 ga., 1 1/4” long	3	6
36	25/32” structural cellulosic fiberboard sheathing	1 3/4” galvanized roofing nail, 7/16” crown or 1” crown staple 16 ga., 1 ½” long	3	6
37	½” gypsum sheathing[d]	1 ½” galvanized roofing nail; staple galvanized, 1 ½” long; 1 ¼ screws, Type W or S	7	7

38	5/8” gypsum sheathing[d]	1 3/4” galvanized roofing nail; staple galvanized, 1 5/8” long; 1 5/8” screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
39	¾” and less	6d deformed (2” x 0.120”) nail or 8d common (2 ½” x 0.131”) nail	6	12
40	7/8” – 1”	8d common (2 1/2” x 0.131”) nail or 8d deformed (2 ½” x 0.120”) nail	6	12
41	1 1/8” – 1 ¼”	10d common (3” x 0.148”) nail or 8d deformed (2 ½” x 0.120”) nail	6	12
Steel columns, posts and beams attachment				
42	Steel column post or beam anchors	Minimum of two ½ inch diameter bolts to the base plate or clip hole for columns or posts weighing 300 lbs or less and a minimum of four ½ inch diameter bolts for all other cases	k	K
43	Steel column post or beam clips	Welds in accordance with AISC 360 the full width of a minimum of two sides	k	k

For SI: 1 inch = 25.4 mm, 1 foot = 304.8mm, 1 mile per hour = .0447 m/s; 1 Ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2 ½’ x 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.
h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.
i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.
k. When a prescriptive method is not available the Installation shall follow the manufacturer’s installation instructions.

R602.10.4.4 Alternate braced wall panels. Alternate braced wall lines constructed in accordance with one of the following provisions shall be permitted to replace each 4 feet (1219 mm) of braced wall panel as required by Section R602.10.1. The maximum height and minimum width of each panel shall be in accordance with Table R602.10.6.1:

1. In a one-story building, each panel shall be sheathed on one face with 3/8 inch minimum thickness (10 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table R602.3(1) and blocked at all wood structural panel sheathing edges. Two anchor bolts installed in accordance with Figure R403.1(1) shall be provided in each panel. Anchor bolts shall be placed at panel quarter points. Each panel end stud shall have a tie-down device fastened to the foundation, capable of providing an uplift capacity in accordance with Table R602.10.6.1. The tie down device shall be installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation which is continuous across the entire length of the braced wall line. This foundation shall be reinforced with at least one No. 4 bar top and bottom. When the foundation is required to have a depth greater than 12 inches (305 mm by 305 mm) a continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with at least one No. 4 bar top and bottom. This reinforcement shall be lapped 15 inches (381 mm) in the continuous foundations located directly under the braced wall line.

2. Throughout the first story of two-story buildings each braced wall panel shall be in accordance with Item 1 above and the wood structural panel sheathing shall be installed on both faces of the brace wall line, The nailing pattern on the sheathing edges shall not exceed 4 inches (102 mm) on center and at least three anchor bolts shall be placed at every one-fifth of the entire length of the braced wall line.. (Example; if a braced wall line is 50 feet in length three anchor bolts shall be installed every 10 feet for the length of the braced wall line.)

3. Table 602.10.4.4(a), 602.10.4.4(b) and 602.10.4.4(c) depicts the minimum use of OSB or Thermoply wall sheathing requirements for one and two-story residences, and meets the 90 MPH (3 second gust) basic wind requirement.

TABLE R602.10.4.4 (a)
MINIMUM OSB WALL SHEATHING REQUIREMENTS FOR TWO-STORY RESIDENCE TO MEET 90 MPH (3 SECOND GUST) BASIC WIND SPEED
(FIRST TO SECOND FLOOR)

EXPOSURE B (SUBURBAN)	
HOUSE DEPTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED FRONT AND REAR SHEATHING LENGTH**
20'-0"	9'-0"
24'-0"	10'-0"
28'-0"	12'-0"
32'-0"	14'-0"
36'-0"	15'-0"
40'-0"	17'-0"
44'-0"	19'-0"
48'-0"	21'-0"
52'-0"	22'-0"
56'-0"	24'-0"
60'-0"	26'-0"

EXPOSURE B (SUBURBAN)	
HOUSE WIDTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED SIDE WALL SHEATHING LENGTH**
50'-0"	22'-0"
60'-0"	26'-0"
70'-0"	30'-0"
80'-0"	34'-0"
90'-0"	39'-0"
100'-0"	43'-0"
110'-0"	47'-0"
120'-0"	53'-0"
130'-0"	56'-0"
140'-0"	60'-0"
150'-0"	66'-0"

Notes:

1. OSB sheathing to be 15/32" thick, attached to studs with 10d nails at 4" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges to be blocked with 2x material.
2. Sheathing lengths to be additive with minimum segment length of 3'-0".
3. Garage /house common wall can be used; 2 to 1 ratio with OSB, 3 to 1 with T-ply (i.e.: 20'-0" wall length equals 10-0" effective sheathing length).
4. Garage wall that includes the overhead garage door shall not be included in any of the provided wall length calculations.
5. If residence is located in rural area, increase required sheathing lengths by 1/3.
6. Maximum first floor ceiling height 10'-0", maximum second floor ceiling height 9'-0", maximum roof height above second floor ceiling 12'-0"
7. Sheath all exterior garage walls with 15/32" OSB with nailing patterns per note 1.

TABLE R602.10.4.4 (b)
MINIMUM OSB WALL SHEATHING REQUIREMENTS FOR TWO-STORY RESIDENCE TO MEET 90 MPH (3 SECOND GUST) BASIC WIND SPEED
(UPPER FLOOR OF TWO-STORY RESIDENCE)

EXPOSURE B (SUBURBAN)	
HOUSE DEPTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED FRONT AND REAR SHEATHING LENGTH**
20'-0"	6'-0"
24'-0"	8'-0"
28'-0"	9'-0"
32'-0"	10'-0"
36'-0"	12'-0"
40'-0"	13'-0"
44'-0"	14'-0"
48'-0"	15'-0"
52'-0"	17'-0"
56'-0"	18'-0"
60'-0"	19'-0"

EXPOSURE B (SUBURBAN)	
HOUSE WIDTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED SIDE WALL SHEATHING LENGTH**
50'-0"	16'-0"
60'-0"	19'-0"
70'-0"	22'-0"
80'-0"	26'-0"
90'-0"	29'-0"
100'-0"	32'-0"
110'-0"	35'-0"
120'-0"	38'-0"
130'-0"	42'-0"
140'-0"	45'-0"
150'-0"	48'-0"

Notes:

1. OSB sheathing to be 15/32" thick, attached to studs with 10d nails at 4" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges to be blocked with 2x material.
2. Sheathing lengths to be additive with minimum segment length of 3'-0".
3. Garage /house common wall can be used; 2 to 1 ratio with OSB, 3 to 1 with T-ply (i.e.: 20'-0" wall length equals 10-0" effective sheathing length).
4. Garage wall that includes the overhead garage door shall not be included in any of the provided wall length calculations.
5. If residence is located in rural area, increase required sheathing lengths by 1/3.
6. Maximum first floor ceiling height 10'-0", maximum roof height above second floor ceiling 15'-0"
7. Sheath all exterior garage walls with 15/32" OSB with nailing patterns per note 1.

TABLE R602.10.4.4 (c)
MINIMUM THERMOPLY WALL SHEATHING REQUIREMENTS FOR TWO-STORY RESIDENCE TO MEET 90 MPH (3 SECOND GUST) BASIC WIND SPEED
(FIRST TO SECOND STORY RESIDENCE)

EXPOSURE B (SUBURBAN)	
HOUSE DEPTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED FRONT AND REAR SHEATHING LENGTH**
20'-0"	10'-0"
24'-0"	12'-0"
28'-0"	13'-0"
32'-0"	15'-0"
36'-0"	17'-0"
40'-0"	19'-0"
44'-0"	21'-0"
48'-0"	23'-0"
52'-0"	25'-0"
56'-0"	26'-0"
60'-0"	28'-0"

EXPOSURE B (SUBURBAN)	
HOUSE WIDTH	**15/32" OSB EXTERIOR SHEATHING, REQUIRED SIDE WALL SHEATHING LENGTH**
40'-0"	19'-0"
50'-0"	24'-0"
60'-0"	28'-0"
70'-0"	33'-0"
80'-0"	37'-0"
90'-0"	42'-0"
100'-0"	47'-0"
110'-0"	51'-0"
120'-0"	56'-0"
130'-0"	61'-0"
140'-0"	65'-0"
150'-0"	70'-0"

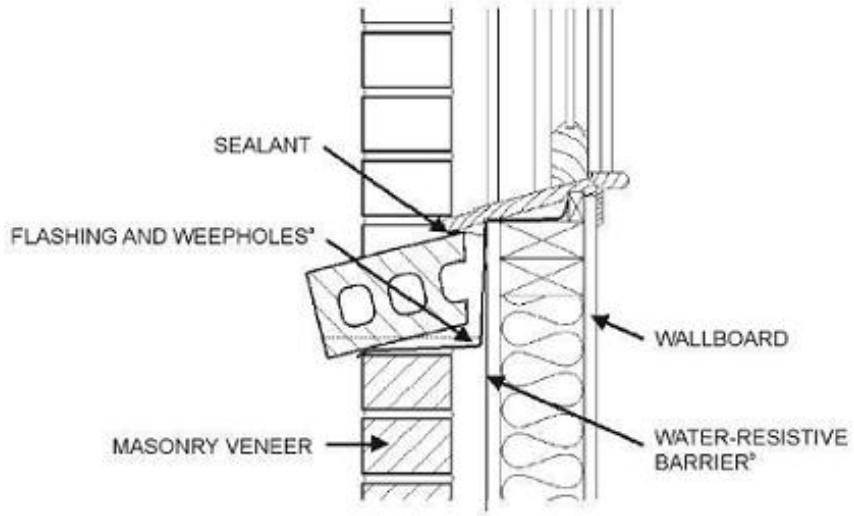
Notes:

1. Thermoply to be 0.135" thick blue structural grade thermoply attached to studs with 16 gage x 7/16" or 1" crown x 1-1/4" long leg staples at 3" o.c. at all panel edges and 3" o.c. at all intermediate supports. Interior sheathing to be 1/2" thick gypsum wallboard attached to all studs and plates with 1-1/4" drywall screws spaced at 7" o.c. at all panel edges and 7" o.c. at all intermediate supports.
2. Sheathing lengths to be additive with minimum segment length of 2'-8".
3. Garage /house common wall can be used; 2 to 1 ratio with OSB, 3 to 1 ratio with T-ply (i.e.: 20'-0" wall length equals 10'-0" effective sheathing length.
4. Garage wall that includes the overhead garage door shall not be included in any of the provided wall length calculations.
5. If residence is located in rural area, exposure "C" increase required sheathing lengths by 1.33.
6. Maximum first floor ceiling height 10'-0", maximum second floor ceiling height 9'-0", maximum roof height above second floor ceiling 12'-0".
7. Sheath all exterior garage walls with 0.135 thermoply with nailing patterns per note 1.
8. Each 2'-8" wall shall be fabricated with a minimum No. 2 grade 2x4 Spruce-Pine-Fir dimension lumber for the top plates, sill plates, and studs. The framing shall consist of double top plates, double sill plates, and double studs (without spacers) for the corner posts. The interior stud is a single member. Stud spacing is a nominal 16 inches (406 mm) on center. A single 2x4 horizontal cross bracing member shall be installed at the wall's mid-height in each stud cavity. The double studs shall be nailed together with 16d common or box nails staggered in a staggered pattern, approximately 2 inches (51 mm) from the stud edge at 24 inches (610 mm) on center. The remaining framing is to be fastened according to Table R602.3 (1) of the *International Residential Code*.
9. Thermoply can be used for one and two-story buildings in seismic design categories A and B when structure is less than 35 feet. Thermoply cannot be used on structures located in seismic design category E and F.

CHAPTER 7
WALL COVERING

SECTION R703
EXTERIOR COVERING

DRAWING 703.7 AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED AND REPLACED WITH THE FOLLOWING:



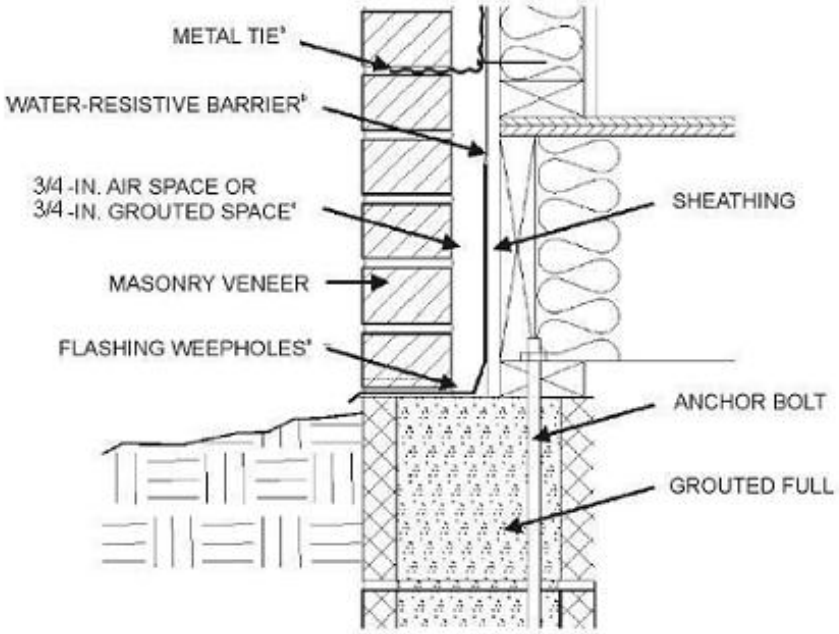


TABLE R703.7.4 TIE ATTACHMENT AND AIR SPACE REQUIREMENTS

BACKING AND TIE	MINIMUM TIE	MINIMUM TIE FASTENER[a]	AIR SPACE	
Wood stud backing with corrugated sheet metal	22 U.S. gage (0.0299 in.) × $^{7}/_{8}$ in. wide	8d common nail[b,c] ($2^{1}/_{2}$ in. × 0.131 in.)	Nominal ¾ in. between sheathing and veneer	
Wood stud backing with metal strand wire	W1.7 (No. 9 U.S. gage; 0.148 in.) with hook embedded in mortar joint	8d common nail[b,c] ($2^{1}/_{2}$ in. × 0.131 in.)	Minimum nominal 3/4 in. between sheathing and veneer	Maximum $4^{1}/_{2}$ in. between backing and veneer
Cold-formed steel stud backing with adjustable metal strand wire	W1.7 (No. 9 U.S. gage; 0.148 in.) with hook embedded in mortar joint	No. 10 screw extending through the steel framing a minimum of three exposed threads	Minimum nominal 3/4 in. between sheathing and veneer	Maximum $4^{1}/_{2}$ in. between backing and veneer

For SI: 1 inch = 25.4 mm.

a. In Seismic Design Category D_0, D_1 or D_2, the minimum tie fastener shall be an 8d ring-shank nail ($2^{1}/_{2}$ in. × 0.131 in.) or a No. 10 screw extending through the steel framing a minimum of three exposed threads.

b. All fasteners shall have rust-inhibitive coating suitable for the installation in which they are being used, or be manufactured from material not susceptible to corrosion.

c. All Fasteners shall penetrate a stud or wood structural panel.

CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R802
WOOD ROOF FRAMING

R802.3.1 **Ceiling joist and rafter connections.** Ceiling joists and rafters shall be nailed to each other in accordance with Table R802.5.1(9), and the rafter shall be nailed to the top plate in accordance with Table R602.3(1), and the rafter shall be fastened to the top plate by the use off approved connectors having a resistance to uplift of not less than 175 pounds (79.45), and shall be in accordance with the manufacturer specifications. Ceiling joists shall be continuous or securely joined in accordance with Table R802.5.1(9) where they meet over any interior partitions and are nailed to the adjacent rafter to provide a continuous tie across the building when such joists are parallel to the rafters.

Where ceiling joists are not connected to the rafters at the top wall plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be a minimum of 2 inches by 4 inches (51 mm by 102 mm) (nominal), installed in accordance with the connection requirements in Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceiling joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or girder designed in accordance with accepted engineering practice.

Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space in accordance with Table R602.3(1).

Collar ties shall be a minimum of 1 inch by 4 inches (25 mm by 102 mm) (nominal), spaced not more than 4 feet (1219 mm) on center.

NOTE: SECTION R802.11 AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY ~~AND REPLACED WITH THE FOLLOWING:~~.

~~**R802.11 Ceiling joist and rafter connections.** Ceiling joists and rafters shall be nailed to each other in accordance with Table R802.5.1(9). The rafter shall be fastened to the top plate by the use of approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg.) and shall be installed in accordance with the manufacturer's specifications.~~

~~**R802.11.1.3 Rafter uplift resistance.** Individual rafters shall be attached to supporting wall assemblies by connections capable of resisting uplift forces as determined by Table R802.11 or as determined by accepted engineering practice. Connections for beams used in a roof system shall be designed in accordance with accepted engineering practice. Ceiling joists and rafters shall be nailed to each other in accordance with Table R802.5.1(9) or shall be fastened to the top plate by the use of approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg.) and shall be installed in accordance with the manufacturer's specifications.~~

R802.12. Roof framing in Seismic Design Category D_0, D_1 and D_2. Braced walls and shear walls in the story below the roof shall be provided with a continuous load path in the direction of the wall to the roof deck by means of parallel roof framing or trusses. Where trusses or ceiling joists are not located directly over the braced wall or shear wall, 2x4 nominal blocking shall be provided between the adjacent joists or trusses. Blocking shall be attached at the joists and the wall plate, spaced at 48-inch (1219 mm) maximum centers for Seismic Design Category D_0 and D_1, and at 24-inch (607 mm) maximum centers for Seismic Design Category D_2. Where roof framing is perpendicular to the braced wall, diagonal bracing consisting of not less than 2x4 nominal lumber and having a slope of not greater than 50 degrees from the horizontal may be used. Bracing members and blocking shall be secured to the wall plate, joists and rafters with two 16d nails at each connection. Bracing members shall be laterally supported on no greater than 75-inch (1905 mm) centers or shall have the thickness increased proportionally to the actual unbraced length with respect to a 75-inch (1905 mm) limit.

SECTION R803
ROOF SHEATHING

R803.1 Lumber sheathing Allowable spans for lumber used as roof sheathing shall conform to Table R803.1. Spaced lumber sheathing for wood shingle and shale roofing shall conform to the requirements of Sections R905.7 and R905.8. Perpendicular lumber sheathing is not allowed in seismic design category D_1 andD_2.

SECTION R806
ROOF VENTILATION

R806.1 Ventilation required. Enclosed *attics* and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of $^1/_{16}$ inch (1.6 mm) minimum and $^1/_4$ inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than $^1/_4$ inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of $^1/_{16}$ inch (1.6 mm) minimum and $^1/_4$ inch

(6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

> **Exception:** Attic ventilation shall not be required when determined not necessary when utilizing alternate provisions in accordance with section R104.10.

CHAPTER 9
ROOF ASSEMBLIES

SECTION R905
REQUIREMENTS FOR ROOF COVERINGS

R905.2.7.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

R905.2.8.5 Drip edge. A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the drip edge on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge. Alternate methods to the standard metal drip edge may include site formed coil stock that creates a drip line as intended by the code. Wood, composite and manufactured trim installed on the fascia shall create a drip line to prevent water from running back under the shingles which will meet the requirements of the drip edge.

R905.4.3.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

R905.5.3.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

R905.6.3.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

R905.7.3.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

R905.8.3.1 Ice barrier. Ice barriers shall be installed when required by a manufacturer's installation specifications. Ice barrier installation shall be in accordance with the manufacturer's installation instructions.

CHAPTER 10
CHIMNEYS AND FIREPLACES

SECTION R1003
MASONRY CHIMNEYS

R1003.9.1 Chimney caps. Masonry chimneys shall have a concrete, metal or stone cap, sloped to shed water.

CHAPTER 11
ENERGY EFFICIENCY

CHAPTER 11 "ENERGY EFFICIENCY" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

N1101.1 Scope. This chapter regulates the energy efficiency for the design and construction of buildings regulated by the 2009 International Energy Conservation Code.

Exceptions:

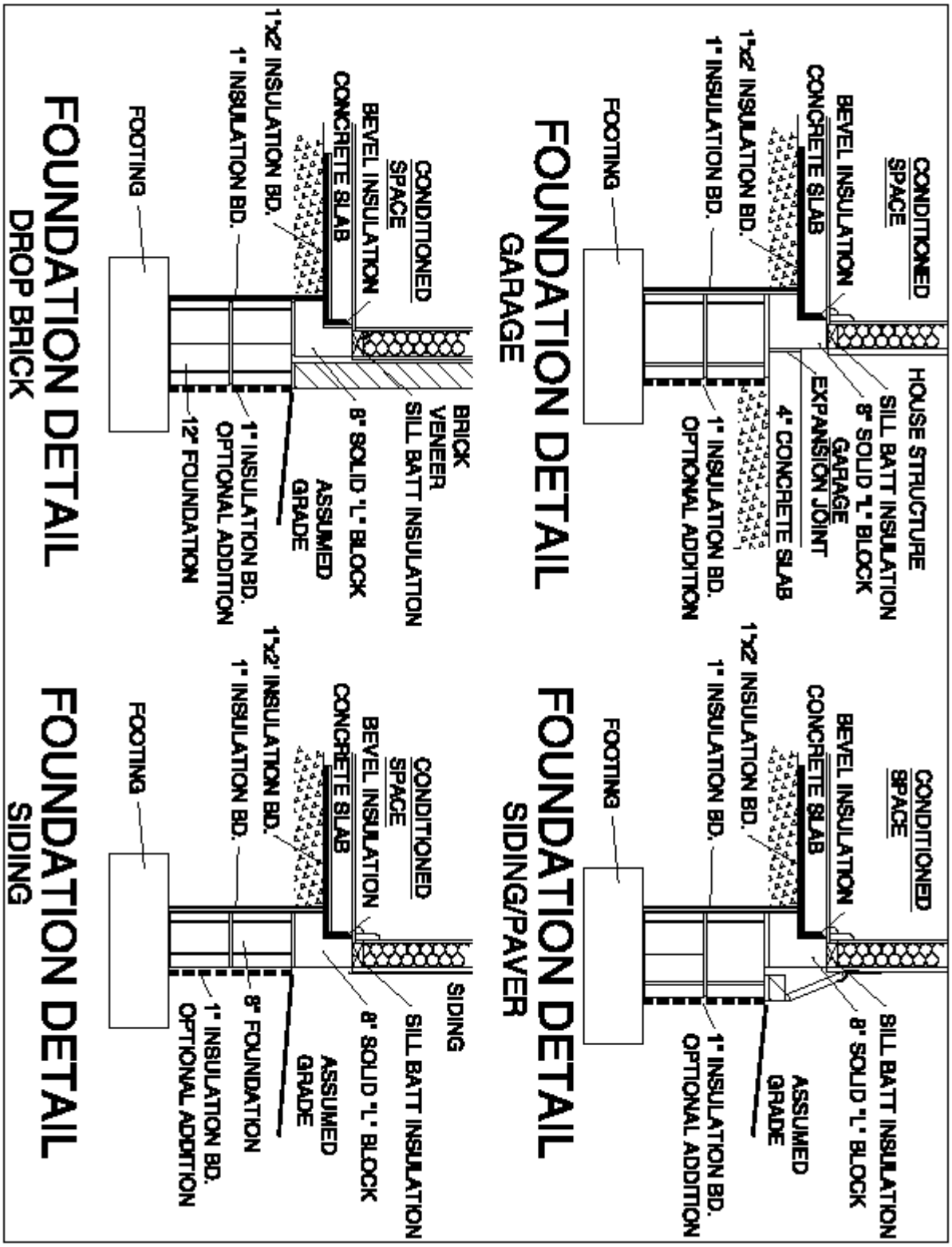
1. Portions of the building envelope that do not enclose conditioned space.
2. Compliance demonstrated by meeting requirements of Section 102.1.1 of the International Energy Conservation Code.

N1101.2 Compliance. Compliance shall be demonstrated by meeting the requirements of the International Energy Conservation Code and Sections N1101.2.1 and N1101.2.2 of this code where applicable.

N1101.2.1 Basement walls. Exterior walls associated with conditioned basements shall be insulated from the inside or outside of the basement wall from the top of the basement wall down to the design frost depth in accordance with Section R403.1.4. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections 402.1.1 and 402.2.6 of the International Energy Conservation Code.

N1101.2.2 Slab on grade floors. Slab on grade floors constructed in accordance with Figure N1101.2.2 shall be permitted as an alternative insulation method.

Figure 1101.2.2 Alternative insulation method for slab on grade floors



CHAPTER 13
GENERAL MECHANICAL SYSTEM REQUIREMENTS

SECTION M1301
GENERAL

M1301.1 Scope. The provisions of this chapter shall govern the installation of mechanical systems not specifically covered in other chapters applicable to mechanical systems. Installation of mechanical appliances, equipment and systems not addressed by this code shall comply with the applicable provisions of the International Mechanical Code and the NFPA 54 National Fuel Gas Code.

CHAPTER 14
HEATING AND COOLING EQUIPMENT AND APPLIANCES

NOTE: SECTION M1411.6 AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 15
EXHAUST SYSTEMS

SECTION M1502
CLOTHES DRYER EXHAUST

M1502.4.1.1 Alternate Material and installation. Clothes dryer exhaust ducts are permitted to be made of PVC and CPVC plastic provided they shall be a nominal 4 inches in diameter. The alternate material shall only be installed below a slab on grade floor and backfilled with sand or gravel. Each dryer exhaust duct joint shall be secured with PVC or CPVC solvent glue and each joint shall provide a smooth interior finish. The maximum installed exhaust duct length shall conform to Section M1502.4.4.1 and labeled in accordance with Section M1502.4.5. The dryer exhaust duct shall be installed to provide positive drainage to the termination and shall not permit the collection of condensate. The exhaust duct shall only extend a maximum of 1 inch above the slab on grade floor for connection to the appliance.

CHAPTER 17
COMBUSTION AIR

CHAPTER 17 "COMBUSTION AIR" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

SECTION M1701
GENERAL

M1701.1 Scope. NFPA 54. The provisions of NFPA 54 National Fuel Gas Code shall apply to all fuel gas, combustion air, chimney, venting and special fuel-burning equipment installations.

CHAPTER 18
CHIMNEYS AND VENTS

CHAPTER 18 "CHIMNEYS AND VENTS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

SECTION M1801
GENERAL

M1801.1 NFPA 54. The provisions of NFPA 54 National Fuel Gas Code shall apply to all fuel gas, combustion air, chimney, venting and special fuel-burning equipment installations.

CHAPTER 19
SPECIAL APPLIANCES, EQUIPMENT AND SYSTEMS

CHAPTER 19 "SPECIAL APPLIANCES, EQUIPMENT AND SYSTEMS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

SECTION M1901
GENERAL

M1901.1 NFPA 54. The provisions of NFPA 54 National Fuel Gas Code shall apply to all fuel gas, combustion air, chimney, venting and special fuel-burning equipment installations.

CHAPTER 20
BOILERS AND WATER HEATERS

SECTION M2001
GENERAL

M2001.1 Referenced Code and Standard. The provisions contained in the Kentucky State Plumbing Code and Kentucky State Boiler and Pressure Vessel and Piping Law and the requirements contained within the NFPA 54 National Fuel Gas Code shall apply to all Boiler/Water Heater installations.

CHAPTER 24
FUEL GAS

Note: CHAPTER 24 "FUEL GAS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

SECTION G2401
GENERAL

G2401.1 (101.2) Application. Installations of mechanical appliances, equipment and systems not addressed by this code shall comply with the applicable provisions of the International Mechanical Code and the NFPA 54 National Fuel Gas Code.

CHAPTER 25
PLUMBING ADMINISTRATION

Note: CHAPTER 25 "PLUMBING ADMINISTRATION" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 26
GENERAL PLUMBING REQUIREMENTS

Note: CHAPTER 26 "GENERAL PLUMBING REQUIREMENTS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 27
PLUMBING FIXTURES

Note: CHAPTER 27 "PLUMBING FIXTURES" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 28
WATER HEATERS

Note: CHAPTER 28 "WATER HEATERS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 29
WATER SUPPLY AND DISTRIBUTION

Note: CHAPTER 29 "WATER SUPPLY AND DISTRIBUTION" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY, EXCEPT FOR SECTION P2904 "DWELLING UNIT FIRE SPRINKLER SYSTEMS."

CHAPTER 30
SANITARY DRAINAGE

Note: CHAPTER 30 "SANITARY DRAINAGE" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 31
VENTS

Note: CHAPTER 31 "VENTS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 32
TRAPS

Note: CHAPTER 32 "TRAPS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 33
STORM DRAINAGE

Note: CHAPTER 33 "STORM DRAINAGE" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 34
GENERAL REQUIREMENTS

Note: CHAPTER 34 "GENERAL REQUIREMENTS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 35
ELECTRICAL DEFINITIONS

Note: CHAPTER 35 "ELECTRICAL DEFINITIONS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 36
SERVICES

Note: CHAPTER 36 "SERVICES" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 37
BRANCH CIRCUIT AND FEEDER REQUIREMENTS

Note: CHAPTER 37 "BRANCH CIRCUIT AND FEEDER REQUIREMENTS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 38
WIRING METHODS

Note: CHAPTER 38 "WIRING METHODS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 39
POWER AND LIGHTING DISTRIBUTION

Note: CHAPTER 39 "POWER AND LIGHTING DISTRIBUTION" AS IT APPEARS IN THE 2012 IRC IS HERE BY DELETED IN ITS ENTIRETY.

CHAPTER 40
DEVICES AND LUMINARIES

Note: CHAPTER 40 "DEVICES AND LUMINARIES" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 41
APPLIANCE INSTALLATION

Note: CHAPTER 41 "APPLIANCE INSTALLATION" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 42
SWIMMING POOLS

CHAPTER 42 "SWIMMING POOLS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.

CHAPTER 43
CLASS 2 REMOTE-CONTROL, SIGNALING AND POWER-LIMITED CIRCUITS

***Note: CHAPTER 43* "CLASS 2 REMOTE-CONTROL, SIGNALING AND POWER-LIMITED CIRCUITS" AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY.**

CHAPTER 44
KENTUCKY CODES REFERENCED STANDARDS

KENTUCKY CODES

Department of Housing, Buildings and Construction
101 Sea Hero Road, Suite 100
Frankfort, Kentucky 40601-5412

Standard Reference Number	Title	Referenced in code section umber
KPC	Kentucky State Plumbing Code……	Chapters 25 through 32
KSB & PV & PL-03	Kentucky State Boiler and Pressure Vessel and Piping Law…….	M2001.1

FEMA

500C. Street SW
Washington, D.C. 20472

Standard Reference Number	Title	Referenced in code section number
FEMA 232 – June, 2006	Home Builders Guide to Seismic Resistant Construction…….…	R301.1.1, R301.2.2

ICC

International Code Council, Inc.
500 New Jersey Avenue , NW
6th Floor
Washington, DC 20001

Standard Reference Number	Title	Referenced in code section number
IBC-06	International Building Code ®……	22.1, R324.1R324.15, R403.1.8, R1001.8.2, G2402.3
IECC-09	International Energy Conservation Code ®……	R104.11
IFC-06	International Fire Code ®……	R102.7, G2402.3, G2412.2, G2423.1
IMC-06	International Mechanical Code ®……...	R104.11, M2106.1, G2402.3

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

70-14	National Electrical Code……	R102.9 and Chapters 33 through 42
54-09	National Fuel Gas Code……	M1301.1, M1701.1, M1801.1, M2001.1, G2401.1

APPENDIX G
SWIMMING POOLS

SECTION AG102
DEFINITIONS

THE FOLLOWING DEFINITIONS AS THEY APPEAR IN THE 2012 IRC ARE HEREBY DELETED IN THEIR ENTIRETY:

ABOVE-GROUND/ON-GROUND POOL
HOT TUB
SPA, NONPORTABLE
SPA, PORTABLE

THE FOLLOWING DEFINITION AS IT APPEARS IN THE 2012 IRC IS HEREBY DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

SWIMMING POOL. Any in-ground structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) deep.

SECTION AG105
BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this appendix shall control the design of barriers for residential swimming pools. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools.

AG105.2 Outdoor swimming pool. An outdoor in-ground swimming pool~~, including an in-ground, above-ground or on-ground pool, hot tub or spa,~~ shall be surrounded by a barrier which shall comply with the following:

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 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. ~~Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).~~
2. Openings in the barrier shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, 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 (610 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.

   Exception: When intermediate horizontal members are located 34 inches (864 mm) or more above grade, the spacing between vertical members shall not exceed 4 inches (102 mm) in width.

5. Where the barrier is composed of horizontal and vertical members, and the distance between the tops of the horizontal members is 24 inches (610 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 3/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 3/4 inches (44 mm).
8. Access gates shall comply with the requirements of Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool, and shall be self-closing and have a self-latching device. Gates, other than pedestrian access gates, shall have a self-latching device. Where the release mechanism of the self-latching device is located less than ~~54~~ 48 inches (1219 mm) above grade, the release mechanism and openings shall comply with the following:

   8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and

   8.2. The gate and barrier shall have no opening larger than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

   9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346;

   9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

   9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described herein.

AG105.6 Locations. Private swimming pools shall not encroach on any front or side yard required by this code or by the governing zoning laws, unless in accordance with specific rules of the jurisdiction in which the pool is located. A wall of a swimming pool shall not be located less than 6 feet (1829mm) from any rear or side property lines or 10 feet (3048mm) from any street property line, unless in accordance with the specific rules of the jurisdiction in which the pool is located.