



South Central Regional Construction Code Council

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General Residential Code Requirements

Residential building code review will be based on compliance with the requirements of the Louisiana State Uniform Construction code in accordance with ACT 12 of the 2005 First Extraordinary Session of the Louisiana Legislature. This review is performed at the request of, and on behalf of the jurisdiction in which this proposed project is located.

Code References:

IRC	2015 International Residential Code (Excluding Chapter 11 “Energy Efficiency”)
IRC	2009 International Residential Code Chapter 11 “Energy Efficiency” Only
NEC	2014 National Electric Code
SSTD 10-99	1999 Guidelines for Hurricane Resistant Residential Construction
ICC 600	2014 ICC Standard for Residential Construction in High-Wind Regions
WFCM	2015 Wood Frame Construction Manual for One- and Two-Family Dwellings

NOTE: The following items described below are not all inclusive to everything that is check during plan review or required per building code. These items are the most common general requirements. Plans should include information to determine compliance with following items:

BASIC WIND SPEED:

(Chapter 3)

- Residence must be designed to withstand wind loads for area being constructed.

(High wind provisions detailing anchoring, strapping, nail patterns for roof and shear-wall sheathing etc..)

- Buildings and structures located in a 140mph V-ult / 110mph V-bsd or greater wind zone shall comply with article R301.2.1.2 of the **2015 International Residential Code** regarding wind borne debris, which states: Wood structural panels (plywood) with a minimum thickness of 7/16 inch and a maximum span of 8 feet shall be permitted for opening protection in lieu of large missile tested impact resistant windows. Panels shall be precut to cover the glazed openings with attachment hardware provided. Attachments shall be provided in accordance with Table R301.2.1.2. Submit evidence of compliance

FLOOD RESISTANT CONSTRUCTION:

(Chapter 3)

- Buildings and structures constructed in flood hazard areas (including A or V Zones as established by the Parish Flood Maps shall be designed in accordance with IRC 322.
- Mechanical and Electrical systems shall be elevated in accordance with IRC 322.1.6.
- Enclosed areas below design flood elevation shall comply with IRC 322.2.2.
- Walls below design flood elevation shall comply with IRC 322.3.4.
- Design documents for Structures located within Coastal High Hazard Areas (Including V-Zones) shall include documentation that is prepared and sealed by a registered design professional that the design and methods of construction to be used meet applicable criteria of IRC 322.3. See attached Document and/or link at SCPDC.org.

LOCATION ON LOT:

(Chapter 3)

- All walls less than 5'-0" from adjacent property lines must be of not less than 1 hour fire-resistive construction as per IRC 302.1.
- Dwelling units in two family dwellings shall be separated from each other by wall and/or floor assemblies having not less than 1 hour fire resistant rating when tested in accordance with ASTM E119. Fire resistance rated floor ceiling and wall assemblies shall extend to the underside of the roof sheathing as per article R302.3 of the 2015 IRC.
- Each townhouse shall be considered a separate building and shall be separated by 2-HR fire resistance rated wall assemblies meeting the requirements of Section R302.

GLAZING:

- Glazing must comply with IRC 308 concerning:
 - ✓ Identification
 - ✓ Impact Loads
 - ✓ Hazardous location
- Windows shall meet minimum design criteria per IRC 301.2.1 and 301.2.1.2. (See last page)

ENERGY EFFICIENCY:

- Glazing shall meet the requirements of climate zone 2 on Table N1102.1 of the 2009 IRC as follows: (The 2012 IRC was adopted by the Louisiana State Uniform Construction Code Council with the exception that the 2012 edition of Chapter 11 is replaced with the IRC 2009 edition of chapter 11)
 - ✓ Fenestration – *U-Factor 0.65 or less*
 - ✓ SHGC- *0.35 or less*
- Energy Efficiency Certificate – A permanent certificate, filled out by the builder or design professional, shall be posted on or in the electrical distribution panel upon completion of all energy requirements and prior to Final Building inspection. The certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels [IRC N1101.9]. See attached example certificate. This certificate or other approved certificate may be used as long as it is permanently installed and protected per notes above. See IRC section N1101.9 for additional instructions/clarifications on filling out this certificate.
- Duct Sealing Testing – Duct Sealing Testing shall be performed by individuals certified to perform duct sealing tests by a nationally recognized organization that trains and provides certification exams for the proper procedures to perform such test. Written test reports and a copy of the tester’s certification shall be submitted to and approved by our office prior to Final Mechanical Inspection [IRC N1103.2.2]. Exception – HVAC contractors, who are not certified to perform duct sealing test, may still perform the test as long as the building department inspector (our inspector) is present at time of test. Contractor must, first, schedule inspection with building department at which point the inspector will call to arrange time sufficient for both parties [IRC N1103.2.2 LSUCCC Amendment].
- Heating and air conditioning equipment performance must comply with IRC N1103. Provide evidence of compliance on plans and submit manual J, S and D reports for compliance verification.
- HVAC ACCA MANUAL J, MANUAL S Compliance Report, AND MANUAL D reports shall be submitted to and approved by this office prior to beginning any mechanical work. Whether this report is provided and approved prior to issuing permit or after permit has been issued, any changes made on the project not correctly reflected in the above noted Manual’s, shall be re-submitted (in its entirety) and approved before continuing work on mechanical system (i.e. changes in type insulation, R-values used, changes in un-vented attic vs. vented attic, type or size of equipment as noted on Manual S) [IRC M1401.3 and M1601.1]. NOTE: Mechanical plan shall include Duct size layout plan. Sizes of ducts, cfm’s for each drop, and proposed equipment size shall be noted on mechanical plan. Also note, AHRI certificate may be submitted in place of the Manual S requirements.
- Insulation requirements:
 - ✓ Ceilings: R-30
 - ✓ Walls: R-13
 - ✓ Floors: R-13

- NOTE: Spray Foam Insulation (if applicable): IF SPRAY FOAM IS TO BE USED OR SPRAY FOAM IS LATER DECIDED TO BE USED AFTER PERMIT APPROVAL AND START OF CONSTRUCTION, THEN APPLICANT/CONTRACTOR SHALL RESUBMIT NEW HVAC ACCA MANUAL J , S and D COMPLIANCE REPORTS. NEW REPORTS SHALL INDICATE THE USE (I.E. WALL, CEILING, RAFTERS, VENTED OR UNVENTED ATTIC APPLICATION) AND TYPE OF SPRAY FOAM INSULATION. APPLICANT/CONTRACTOR SHALL ALSO PROVIDE PRODUCT INFORMATION AND/OR ICC ES REPORT NUMBER FOR VERIFICATION OF PRODUCT USE AND R-VALUE THICKNESS REQUIREMENTS PRIOR TO INSTALLATION AND INSPECTION.

GARAGES AND CARPORTS:

- Openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches thick, or 20 minute fire rated doors as per IRC 302.5.1.
- The garage shall be separated from the residence and its attic area by not less than ½ inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8 inch Type X gypsum board or equivalent. Where the separation is a floor ceiling assembly, the structure supporting the separation shall also be protected by not less than ½ inch gypsum board or equivalent as per IRC 302.6.

EGRESS:

(Chapter 3)

- Landings are required at exterior doors as per IRC 311.3.
- Bedroom windows must comply with the emergency egress provisions of IRC 310.1.
- The maximum stair riser height shall be 7 ¾ inches as IRC 311.7.5.1.
- The minimum stair tread depth shall be 10 inches as per IRC 311.7.5.2.
- There shall be a floor or landing at the top and bottom of each stairway. A landing is required at the top of an interior flight of stairs as per IRC 311.7.6.
- The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform per IRC 311.7.2.
- A flight of stairs shall not have a vertical rise greater than 12ft-3in between floor levels or landings as per IRC 311.7.3.
- The width of each landing shall not be less than the stairway served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel as per Section R311.7.6. Handrails shall be provided on at least one side of each continuous run of stair treads or flight with four or more risers as per IRC 311.7.8.

- Handrail height shall be not less than 34 inches and not more than 38 inches as per IRC 311.7.8.1.
- Spiral stairways as per IRC 311.7.10.1 are permitted, provided the minimum width shall be 26 inches with each tread having a 7 ½ inches minimum tread depth at 12 inches from the narrower edge. All treads shall be identical, and the rise shall be no more than 9 1/2 inches. A minimum headroom of 6 feet 6 inches shall be provided.
- Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height. Open sides of stairs with a total rise of more than 30 inches above the floor or grade below shall have guards not less than 34 inches in height measured vertically from the nosing of the treads as per IRC 312.1.

SMOKE ALARMS:

(Chapter 3)

- Carbon Monoxide Alarms shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages [IRC 315.1].
- Smoke alarms shall be installed in the following locations per IRC 314:
 - ✓ In each sleeping room.
 - ✓ Outside each separate sleeping area in the immediate vicinity of the bedrooms.
 - ✓ On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics.
 - ✓ In dwelling or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
 - ✓ When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. All alarms shall be listed and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

EMERGENCY ESCAPE AND RESCUE OPENINGS (Bedroom Windows):

(Chapter 3)

- R310.1 EMERGENCY ESCAPE AND RESCUE REQUIRED. Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. They shall have a sill height of not more than 44 inches above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with IRC 310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the 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 IRC 310.2.
- R310.1.1 MINIMUM OPENING AREA. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet. **Exception:** Grade floor openings shall have a minimum net clear opening of 5 square feet.
- R310.1.2 MINIMUM OPENING HEIGHT. The minimum net clear opening height shall be 24 inches.
- R310.1.3 MINIMUM OPENING WIDTH. The minimum net clear opening width shall be 20 inches.

FOUNDATION:

(Chapter 4) All References to this section are per IRC 301.2.1.1, Section 303 of the *Southern Building Code of Congress International 1999 Standard for Hurricane Resistant Residential Construction (SSTD 10-99) AND ICC 600.*

- Indicate concrete slab's compressive strength and verify compliance.
- Footing size must comply with the minimum width and depth.
- Minimum footing rebar size must be Number 5.
- All exterior footings shall be placed at least 12 inches below the undisturbed ground surface.
- Foundation anchor bolt minimum spacing
- Under floor space must comply with Sections R408.1 through R408.7 concerning the following:
 - ✓ Ventilation
 - ✓ Ventilation openings
 - ✓ Access

- ✓ Removal of debris
- ✓ Flood resistance
- Concrete slab on ground shall be a minimum of 3.5 inches per SSTD10-99
- A 6 mil polyethylene or approved vapor retarder is required as per SSTD 10-99

FLOORS:

(Chapter 5)

- Floor joists shall not exceed the allowable spans as per IRC Table R502.3.1 (1&2).
- Truss design drawings shall comply with IRC 502.11.4.
- A minimum Draft stopping of 1000 square feet of area when there is usable space both above and below the concealed space of a floor/ceiling assembly per IRC 302.12 and 502.12.
- Under floor space must meet the provisions of IRC 408 relative to ventilation, openings, access, and flood resistance
- Specify wood species and grade as per section R502.

COLUMNS:

(Chapter 4)

- Columns at porch shall meet the structural, anchorage, and decay provisions of IRC 407.

WALLS:

(Chapter 6)

- Wall framing must comply with the identification marking as per IRC 602.1.

CEILINGS:

(Chapter 5 and 8)

- Ceiling joists shall not exceed the allowable spans per IRC Table 802.4 (1&2).

FIRE WALLS:

(Chapter 3)

- All walls less than 5'-0" from adjacent property lines must be of not less than 1 hour fire resistive construction as per section R302.1 of the 2006 IRC.
- Dwelling units in two family dwellings shall be separated from each other by wall and/or floor assemblies having not less than 1 hour fire resistant rating when tested in accordance with ASTM E119. Fire resistance rated floor ceiling and wall assemblies shall extend to the underside of the roof sheathing as per article R302.3 of the 2015 IRC.
- Each townhouse shall be considered a separate building and shall be separated by 2-HR fire resistance rated wall assemblies meeting the requirements of Section R302.
- Walls shall meet all high wind provisions in accordance with 2015 Wood Frame Construction Manual and/or Institute for Business & Home Safety (1999 Guidelines for Hurricane resistant Residential Construction). Included should be details indicating the following items: stud sizes, spacing, anchoring, strapping, and sheathing nailing patterns.

ROOF:

(Chapter 8 and 9)

- Roofs shall meet all high wind provisions in accordance with 2015 Wood Frame Construction Manual and/or Institute for Business & Home Safety (1999 Guidelines for Hurricane resistant Residential Construction). Included should be details indicating the following items: rafter sizes, spacing, strapping, and sheathing nailing patterns.

CHIMNEYS AND FIREPLACES:

(Chapter 10)

- Factory built fireplaces shall be listed and tested in accordance with UL 127 as per IRC 1004.1.
- Hearth extensions shall comply with the provisions of IRC 1001.9.
- Combustible material clearance shall meet the requirements of IRC 1003.18.

LIGHT, VENTILATION AND HEATING:

(Chapter 3)

- Bathroom must comply with the artificial light provisions of article R303.3.

- ✓ R303.3 BATHROOMS. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet, one half of which must be openable.

Exception:

The glazed areas shall not be required where artificial light and a mechanical ventilation system are provided. The mechanical ventilation rates shall be 50 c.f.m. for intermittent ventilation of 20 cfm for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.

CEILING HEIGHT:

- All rooms must have a minimum ceiling height of 7 feet as per section R305.1.

GLAZING IN HAZARDOUS LOCATIONS:

(Chapter 3)

- The following shall be considered specific hazardous locations for the purposes of glazing and shall be provided with safety glazing in accordance with R308.1 and 308.4:
 - ✓ Glazing in swinging doors except jalousies.
 - ✓ Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bi fold closet door assemblies.
 - ✓ Glazing in storm doors.
 - ✓ Glazing in all unframed swinging doors.
 - ✓ Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface.
 - ✓ Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-in arc of the door in the closed position and whose bottom edge is less than 60 inches above the floor or walking surface.
 - ✓ Glazing in an individual fixed or operable panel, other than those locations described in the previous two items above, that meet all of the following conditions:
 - Exposed area of an individual pane larger than 9 square feet.
 - Bottom edge less than 18 inches above the floor.
 - Top edge more than 36 inches above the floor.
 - One or more walking surfaces within 36 inches horizontally of the glazing.

- ✓ All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels.
- ✓ Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60 inches above a walking surface and within 60 inches horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing.
- ✓ Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane of the adjacent walking surface.
- ✓ Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches above the nose of the tread.

The following chart is provided to clarify the DP rating requirements for windows based on design wind speed of area being installed per the International Residential Code and the Guidelines for Hurricane Resistant Residential Construction.

DP Rating For Design Wind Speeds

[Based on 2015 IRC - Table R301.2(2)]

Center of Wall						
opening area (sf)	110mph	120mph	130mph	140mph	150mph	160mph
10	DP-15	DP-20	DP-20	DP-25	DP-30	DP-30
20	DP-15	DP-20	DP-20	DP-25	DP-25	DP-30
50	DP-15	DP-15	DP-20	DP-20	DP-25	DP-30
100	DP-15	DP-15	DP-20	DP-20	DP-25	DP-25
500	DP-10	DP-15	DP-15	DP-20	DP-20	DP-25

Corner of wall (openings located within 4 feet of corner)						
opening area (sf)	110mph	120mph	130mph	140mph	150mph	160mph
10	DP-20	DP-20	DP-25	DP-30	DP-35	DP-40
20	DP-20	DP-20	DP-25	DP-30	DP-30	DP-35
50	DP-15	DP-20	DP-20	DP-25	DP-30	DP-35
100	DP-15	DP-20	DP-20	DP-25	DP-25	DP-30
500	DP-10	DP-15	DP-15	DP-20	DP-20	DP-25

Windows shall meet the requirements of climate zone 2 on Table N1102.1 of the IRC as follows:

Fenestration (*U-Factor*: 0.65 or less)

Glazed Fenestration (SHGC: 0.35 or less)

Michael Wich
Building Official