

CHAPTER 8

ROOF-CEILING CONSTRUCTION

SECTION R801 GENERAL

R801.1 Application. The provisions of this chapter shall control the design and construction of the roof-ceiling system for all buildings (see Section R301.2.1.1).

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

R801.2 Requirements. Roof and ceiling construction shall be capable of accommodating all loads imposed according to Section R301 and of transmitting the resulting loads to the supporting structural elements.

R801.3 Roof drainage. In areas where expansive or collapsible soils are known to exist, all *dwellings* shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface at least 5 feet (1524 mm) from foundation walls or to an *approved* drainage system.

SECTION R802 WOOD ROOF FRAMING

R802.1 General Requirements. Roof and ceiling framing of wood construction shall be designed and constructed in accordance with the provisions of this Section.

R802.1.1 [IRC R802.1] Identification. Load-bearing dimension lumber for rafters, trusses and ceiling joists shall be identified by a grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by a lumber grading or inspection agency meeting the requirements of this section shall be accepted.

R802.1.2 [IRC R802.1.1] Blocking. Blocking shall be a minimum of utility *grade* lumber.

R802.1.3 [IRC R802.1.2] End-jointed lumber. *Approved* end-jointed lumber identified by a grade mark conforming to Section R802.1.1 may be used interchangeably with solid-sawn members of the same species and grade.

R802.1.4 [IRC R802.1.3] Fire-retardant-treated wood. Fire-retardant-treated wood (FRTW) is any wood product which, when impregnated with chemicals by a pressure process or other means during manufacture, shall have, when tested in accordance with ASTM E 84, a listed flame spread index of 25 or less and shows no evidence of significant progressive combustion when the test is continued for an additional 20-minute period. In addition, the flame front shall not progress more than 10.5 feet (3200 mm) beyond the center line of the burners at any time during the test.

R802.1.4.1 [IRC R802.1.3.1] Pressure process. For wood products impregnated with chemicals by a pressure process, the process shall be performed in closed vessels under pres-

ures not less than 50 pounds per square inch gauge (psig) (344.7 kPa).

R802.1.4.2 [IRC R802.1.3.2] Other means during manufacture. For wood products produced by other means during manufacture, the treatment shall be an integral part of the manufacturing process of the wood product. The treatment shall provide permanent protection to all surfaces of the wood product.

R802.1.4.3 [IRC R802.1.3.3] Testing. For wood products produced by other means during manufacture other than a pressure process, all sides of the wood product shall be tested in accordance with and produce the results required in Section R802.1.4. Testing of only the front and back faces of wood structural panels shall be permitted.

R802.1.4.4 [IRC R802.1.3.4] Labeling. Fire-retardant-treated lumber and wood structural panels shall be *labeled*. The *label* shall contain:

1. The identification *mark* of an *approved agency* in accordance with Section 1703.5 of the *Florida Building Code, Building*.
2. Identification of the treating manufacturer.
3. The name of the fire-retardant treatment.
4. The species of wood treated.
5. Flame spread index and smoke-developed index.
6. Method of drying after treatment.
7. Conformance to applicable standards in accordance with Sections R802.1.4.5 through R802.1.4.8.
8. For FRTW exposed to weather, or a damp or wet location, the words “No increase in the listed classification when subjected to the Standard Rain Test” (ASTM D 2898).

R802.1.4.5 [IRC R802.1.3.5] Strength adjustments. Design values for untreated lumber and wood structural panels as specified in Section R802.1.1 shall be adjusted for fire-retardant-treated wood. Adjustments to design values shall be based upon an *approved* method of investigation which takes into consideration the effects of the anticipated temperature and humidity to which the fire-retardant-treated wood will be subjected, the type of treatment and redrying procedures.

R802.1.4.5.1 [IRC R802.1.3.5.2] Wood structural panels. The effect of treatment and the method of redrying after treatment, and exposure to high temperatures and high humidities on the flexure properties of fire-retardant-treated softwood plywood shall be determined in accordance with ASTM D 5516. The test data developed by ASTM D 5516 shall be used to develop adjustment factors, maximum loads and spans, or both for untreated plywood design val-

ues in accordance with ASTM D 6305. Each manufacturer shall publish the allowable maximum loads and spans for service as floor and roof sheathing for their treatment.

R802.1.4.5.2 [IRC R802.1.3.5.2] Lumber. For each species of wood treated, the effect of the treatment and the method of redrying after treatment and exposure to high temperatures and high humidities on the allowable design properties of fire-retardant-treated lumber shall be determined in accordance with ASTM D 5664. The test data developed by ASTM D 5664 shall be used to develop modification factors for use at or near room temperature and at elevated temperatures and humidity in accordance with ASTM D 6841. Each manufacturer shall publish the modification factors for service at temperatures of not less than 80°F (27°C) and for roof framing. The roof framing modification factors shall take into consideration the climatological location.

R802.1.4.6 [IRC R802.1.3.6] Exposure to weather. Where fire-retardant-treated wood is exposed to weather or damp or wet locations, it shall be identified as “Exterior” to indicate there is no increase in the listed flame spread index as defined in Section R802.1.4 when subjected to ASTM D 2898.

R802.1.4.7 [IRC R802.1.3] Interior applications. Interior fire-retardant-treated wood shall have a moisture content of not over 28 percent when tested in accordance with ASTM D 3201 procedures at 92 percent relative humidity. Interior fire-retardant-treated wood shall be tested in accordance with Section R802.1.4.5.1 or R802.1.4.5.2. Interior fire-retardant-treated wood designated as Type A shall be tested in accordance with the provisions of this section.

R802.1.4.8 [IRC R802.1.3.8] Moisture content. Fire-retardant-treated wood shall be dried to a moisture content of 19 percent or less for lumber and 15 percent or less for wood structural panels before use. For wood kiln dried after treatment (KDAT) the kiln temperatures shall not exceed those used in kiln drying the lumber and plywood submitted for the tests described in Section R802.1.4.5.1 for plywood and R802.1.4.5.2 for lumber.

R802.1.5 [IRC R802.1.4] Structural glued laminated timbers. Glued laminated timbers shall be manufactured and identified as required in ANSI/AITC A190.1 and ASTM D 3737.

R802.1.6 [IRC R802.10] Wood trusses.

R802.1.6.1 [IRC R802.10.1] Truss design drawings. Truss design drawings, prepared in conformance to Section R802.1.6.1, shall be provided with the building official and approved prior to installation. Truss design drawings shall include, at a minimum, the information specified below. Truss design drawing shall be provided with the shipment of trusses delivered to the jobsite.

1. Ultimate design wind speed, V_{ult} and exposure category.
2. Slope or depth, span and spacing.
3. Location of all joints.

4. Required bearing widths.
5. Design loads as applicable.
 - 5.1. Top chord live load (as determined from Section R301.6).
 - 5.2. Top chord dead load.
 - 5.3. Bottom chord live load.
 - 5.4. Bottom chord dead load.
 - 5.5. Concentrated loads and their points of application.
 - 5.6. Controlling wind and earthquake loads.
6. Adjustments to lumber and joint connector design values for conditions of use.
7. Each reaction force and direction.
8. Joint connector type and description (e.g., size, thickness or gage) and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.
9. Lumber size, species and *grade* for each member.
10. Connection requirements for:
 - 10.1. Truss to truss girder.
 - 10.2. Truss ply to ply.
 - 10.3. Field splices.
11. Calculated deflection ratio and/or maximum description for live and total load.
12. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss design drawing or on supplemental documents.
13. Required permanent truss member bracing location.

R802.1.6.2 [IRC R802.10.2] Design. Wood trusses shall be designed in accordance with accepted engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered professional where required by by *Florida Statutes*.

R802.1.6.2.1 [IRC R802.10.2.1] Applicability limits. Reserved.

R802.1.6.3 [IRC R802.10.3] Bracing. Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements specified in the *construction documents* for the building and on the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with the Building Component Safety Information (BCSI 1-03) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

R802.1.6.4 [IRC R802.10.4] Alterations to trusses. Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered *design professional*. Alterations resulting in the addition of load (e.g., HVAC equipment, water heater) that exceeds the design load for the truss shall not be permitted without verification that the truss is capable of supporting such additional loading.

R802.1.6.5 [IRC R802.10.5] Truss to wall connection. Trusses shall be connected to wall plates by the use of approved connectors having a resistance to design uplift, lateral and shear forces. Trusses shall be installed in accordance with the manufacturer’s design and specifications.

R802.1.7 [IRC R802.1.5] Structural log members. Stress grading of structural log members of nonrectangular shape, as typically used in log buildings, shall be in accordance with ASTM D 3957. Such structural log members shall be identified by the grade mark of an *approved* lumber grading or inspection agency. In lieu of a grade mark on the material, a certificate of inspection as to species and grade issued by a lumber-grading or inspection agency meeting the requirements of this section shall be permitted to be accepted.

R802.1.8 [IRC R802.7] Cutting and notching. Structural roof members shall not be cut, bored or notched in excess of the limitations specified in this section.

R802.1.8.1 [IRC R802.7.1] Sawn lumber. Notches in solid lumber joists, rafters, blocking and beams shall not exceed one-sixth of the depth of the member, shall not be longer than one-third of the depth of the member and shall not be located in the middle one-third of the span. Notches at the ends of the member shall not exceed one-fourth the depth of the member. The tension side of members 4 inches (102 mm) or greater in nominal thickness shall not be notched except at the ends of the members. The diameter of the holes bored or cut into members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches (51 mm) to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches (51 mm) to the notch.

Exception: Notches on cantilevered portions of rafters are permitted provided the dimension of the remaining portion of the rafter is not less than 4-inch nominal (102 mm) and the length of the cantilever does not exceed 24 inches (610 mm).

R802.1.8.2 [IRC R802.7.2] Engineered wood products. Cuts, notches and holes bored in trusses, structural composite lumber, structural glue-laminated members or I-joists are prohibited except where permitted by the manufacturer’s recommendations or where the effects of such *alterations* are specifically considered in the design of the member by a registered *design professional*.

R802.1.9 [IRC 802.11.1] Uplift resistance. Roof assemblies shall have roof rafters or trusses attached to their supporting wall assemblies by connections capable of providing the resistance required in Table R802.1.9.

A continuous load path shall be designed to transmit the uplift forces from the rafter or truss ties to the foundation. For rafter construction, straps and/or clips shall extend such that the top nail is within 1 inch of the top of the rafter, or shall be wrapped around the top of the rafter with one or more nails installed on the opposite side of the rafter.

R802.2 Design and construction. Roof-ceilings of light-frame wood construction shall be designed and constructed in accordance with the provisions of Section R301.2.1.1 and Section R802.1.

Exceptions:

1. For rafter connections to the top plate, straps and/or clips shall extend such that the top nail is within 1 inch of the top of the rafter, or shall be wrapped around the top of the rafter with one or more nails installed on the opposite side of the rafter.
2. Roof sheathing shall be at a minimum attached in accordance with Section R803.2.3.

R802.3 Framing details. Reserved.

R802.3.1 Ceiling joist and rafter connections. Reserved.

R802.3.2 Ceiling joists lapped. Reserved.

R802.4 Allowable ceiling joist spans. Reserved.

Table R802.4(1) Ceiling Joist Spans For Common Lumber Species (Uninhabitable attics without storage, live load = 10 psf, L/Δ = 240). Reserved.

Table R802.4(2) Ceiling Joist Spans For Common Lumber Species (Uninhabitable attics without storage, live load = 20 psf, L/Δ = 240). Reserved.

R802.5 Allowable rafter spans. Reserved.

R802.5.1 Purlins. Reserved.

Table R802.5.1(1) Rafter Spans For Common Lumber Species (Roof live load=20 psf, ceiling not attached to rafters, L/Δ = 180). Reserved.

Table R802.5.1(2) Rafter Spans For Common Lumber Species (Roof live load=20 psf, ceiling attached to rafters, L/Δ = 240). Reserved

Table R802.5.1(3) Rafter Spans for Common Lumber Species (Ground snow load = 30 psf, ceiling not attached to rafters, L/Δ = 180). Reserved.

Table R802.5.1(4) Rafter Spans for Common Lumber Species (Ground snow load = 50 psf, ceiling not attached to rafters, L/Δ = 180). Reserved.

Table R802.5.1(5) Rafter Spans for Common Lumber Species (Ground snow load = 30 psf, ceiling not attached to rafters, L/Δ = 240). Reserved.

Table R802.5.1(6) Rafter Spans for Common Lumber Species (Ground snow load = 50 psf, ceiling not attached to rafters, L/Δ = 240). Reserved.

Table R802.5.1(7) Rafter Spans for 70 PSF Ground Snow Load (Ceiling not attached to rafters, L/Δ = 180). Reserved.

**TABLE R802.1.9
WIND UPLIFT FORCES^{a,b,c,e,f}**

UPLIFT EXPOSURE B								
ULTIMATE DESIGN WIND SPEED, V_{ult}	ROOF SPAN (feet)							OVERHANGS
	12	20	24	28	32	36	40	
110	-90.44	-150.73	-180.88	-211.03	-241.17	-271.32	-301.47	-32.3
120	-114.47	-190.79	-228.95	-267.11	-305.26	-343.42	-381.58	-38.4
130	-140.60	-234.33	-281.20	-328.06	-374.93	-421.79	-468.66	-45.1
140	-168.81	-281.35	-337.62	-393.89	-450.16	-506.44	-562.71	-52.3
150	-199.12	-331.86	-398.23	-464.60	-530.97	-597.35	-663.72	-60.0
110	-53.71	-89.52	-107.42	-125.32	-143.22	-161.13	-179.03	-25.3
120	-70.76	-117.94	-141.52	-165.11	-188.70	-212.28	-235.87	-30.1
130	-89.30	-148.83	-178.59	-208.36	-238.12	-267.89	-297.65	-35.3
140	-109.31	-182.19	-218.63	-255.07	-291.50	-327.94	-364.38	-40.9
150	-130.81	-218.02	-261.63	-305.23	-348.84	-392.44	-436.05	-47.0
UPLIFT EXPOSURE C								
110	-141.27	-235.45	-282.55	-329.64	-376.73	-423.82	-470.91	-45.3
120	-174.97	-291.62	-349.94	-408.26	-466.59	-524.91	-583.23	-53.9
130	-211.60	-352.66	-423.19	-493.72	-564.26	-634.79	-705.32	-63.2
140	-251.15	-418.59	-502.31	-586.02	-669.74	-753.46	-837.18	-73.3
150	-293.64	-489.40	-587.28	-685.16	-783.04	-880.92	-978.80	-84.2
110	-89.78	-149.63	-179.55	-209.48	-239.40	-269.33	-299.25	-35.4
120	-113.68	-189.47	-227.37	-265.26	-303.16	-341.05	-378.94	-42.2
130	-139.67	-232.78	-279.34	-325.90	-372.45	-419.01	-465.57	-49.5
140	-167.74	-279.56	-335.47	-391.38	-447.29	-503.21	-559.12	-57.4
150	-197.88	-329.80	-395.76	-461.72	-527.68	-593.64	-659.60	-65.9

Notes:

- a. The uplift loads are pounds per lineal foot of building length. For roof uplift connections use the tables for 20 degrees and multiply by 1.33 for framing spaced 16 inches on center and multiply by 2 for framing spaced 24 inches on center
- b. The uplift loads include an allowance for 10 pounds of dead load.
- c. The uplift loads do not account for the effects of overhangs. The magnitude of the above loads shall be increased by adding the overhang loads found in the table. The overhang loads are also based on framing spaced 12 inches on center. The overhang loads given shall be multiplied by the overhang projection and added to the roof uplift value in the table.
- d. End zones extend 8 feet from building corners.
- e. For buildings with a roof slope of 5:12 or greater, tabulated uplift loads shall be permitted to be multiplied by 0.87.
- f. Negative values indicate uplift.
- g. For Ultimate design wind speeds, V_{ult} greater than 150 mph, wind uplift forces shall be determined in accordance with Section R802.2 or ASCE 7.

Table R802.5.1(8) Rafter Spans for 70 PSF Ground Snow Load (Ceiling not attached to rafters, $L/\Delta = 180$). Reserved.

Table R802.5.1(9) Rafter/Ceiling Joist Heel Joint Connections. Reserved.

Figure 802.5.1 Braced Rafter Construction. Reserved.

R802.6 Bearing. Reserved.

R802.6.1 Finished ceiling material. Reserved.

R802.7 Cutting and Notching. [Moved to R802.1.8]

R802.8 Lateral support. Reserved.

R802.8.1 Bridging. Reserved.

R802.9 Framing of openings. Reserved.

R802.10 Wood Trusses. [Moved to R802.1.6]

R802.11 Roof tie-down. [Moved to R802.1.9]

Table R802.11 Required Strength of Truss or Rafter Connections to Resist Wind Uplift Forces (Pounds per connection). Reserved.

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 shake roofing shall conform to the requirements of Sections R905.7 and R905.8.

**TABLE R803.1
MINIMUM THICKNESS OF LUMBER ROOF SHEATHING**

RAFTER OR BEAM SPACING (inches)	MINIMUM NET THICKNESS (inches)
24	$5/8$
48 ^a	1 1/2 T & G
60 ^b	
72 ^c	

For SI: 1 inch = 25.4 mm.

a. Minimum 270 F_b , 340,000 E .

b. Minimum 420 F_b , 660,000 E .

c. Minimum 600 F_b , 1,150,000 E .

R803.2 Wood structural panel sheathing.

R803.2.1 Identification and grade. Wood structural panels shall conform to DOC PS 1, DOC PS 2 or, when manufactured in Canada, CSA O437 or CSA O325, and shall be identified by a grade mark or certificate of inspection issued by an *approved* agency. Wood structural panels shall comply with the grades specified in Table R503.2.1.1(1).

R803.2.1.1 Exposure durability. All wood structural panels, when designed to be permanently exposed in outdoor applications, shall be of an exterior exposure durability. Wood structural panel roof sheathing exposed to the underside may be of interior type bonded with exterior glue, identified as Exposure 1.

R803.2.1.2 Fire-retardant-treated plywood. The allowable unit stresses for fire-retardant-treated plywood, including fastener values, shall be developed from an *approved* method of investigation that considers the effects of anticipated temperature and humidity to which the fire-retardant-treated plywood will be subjected, the type of treatment and redrying process. The fire-retardant-treated plywood shall be graded by an *approved* agency.

R803.2.2 Allowable spans. The maximum allowable spans for wood structural panel roof sheathing shall not exceed the values set forth in Table R503.2.1.1(1), or APA E30.

R803.2.3 Installation. Wood structural panels used as roof sheathing shall be installed with joints staggered in accordance with Section R803.2.3.1 for wood roof framing or in accordance with AISI 230 for steel roof framing.

R803.2.3.1 Sheathing fastenings. Wood structural panel sheathing shall be fastened to roof framing with 8d ring-shank nails at 6 inches on center at edges and 6 inches on center at intermediate framing. Ring-shank nails shall have the following minimum dimensions:

1. 0.113 inch nominal shank diameter.
2. Ring diameter of 0.012 over shank diameter.
3. 16 to 20 rings per inch.
4. 0.280 inch full round head diameter.
5. 2 inch nail length.

Where roof framing with a specific gravity, $0.42 \leq G < 0.49$ is used, spacing of ring-shank fasteners shall be 4 inches on center in nailing zone 3 in accordance with Figure R803.2.3.1 where V_{asd} as determined in accordance with Section R301.2.1.3 is 130 mph or greater.

Exceptions:

1. Where roof framing with a specific gravity, $0.42 \leq G < 0.49$ is used, spacing of ring-shank fasteners shall be permitted at 12 inches on center at intermediate framing in nailing zone 1 for any V_{asd} as determined in accordance with Section R301.2.1.3 and in nailing zone 2 for V_{asd} as determined in accordance with Section R301.2.1.3 less than or equal to 110 mph in accordance with Figure R803.2.3.1.
2. Where roof framing with a specific gravity, $G \geq 0.49$ is used, spacing of ring-shank fasteners shall be permitted at 12 inches on center at intermediate framing in nailing zone 1 for any V_{asd} as determined in accordance with Section R301.2.1.3 and in nailing zone 2 for V_{asd} as determined in accordance with Section R301.2.1.3 less than or equal to 120 mph in accordance with Figure R803.2.3.1.
3. Where roof framing with a specific gravity, $G \geq 0.49$ is used, 8d common or 8d hot dipped galvanized box nails at 6 inches on center at edges and 6 inches on center at intermediate framing shall be permitted for V_{asd} as determined in accordance with Section R301.2.1.3 less than

or equal to 100 mph in accordance with Figure R803.2.3.1.

- Where roof diaphragm requirements necessitate a closer fastener spacing.

**SECTION R804
STEEL ROOF FRAMING
RESERVED**

**SECTION R805
CEILING FINISHES**

R805.1 Ceiling installation. Ceilings shall be installed in accordance with the requirements for interior wall finishes as provided in Section R702.

**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. Ventilation openings shall have a least dimension of $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than $\frac{1}{4}$ 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 $\frac{1}{16}$ inch (1.6 mm) minimum and $\frac{1}{4}$ inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

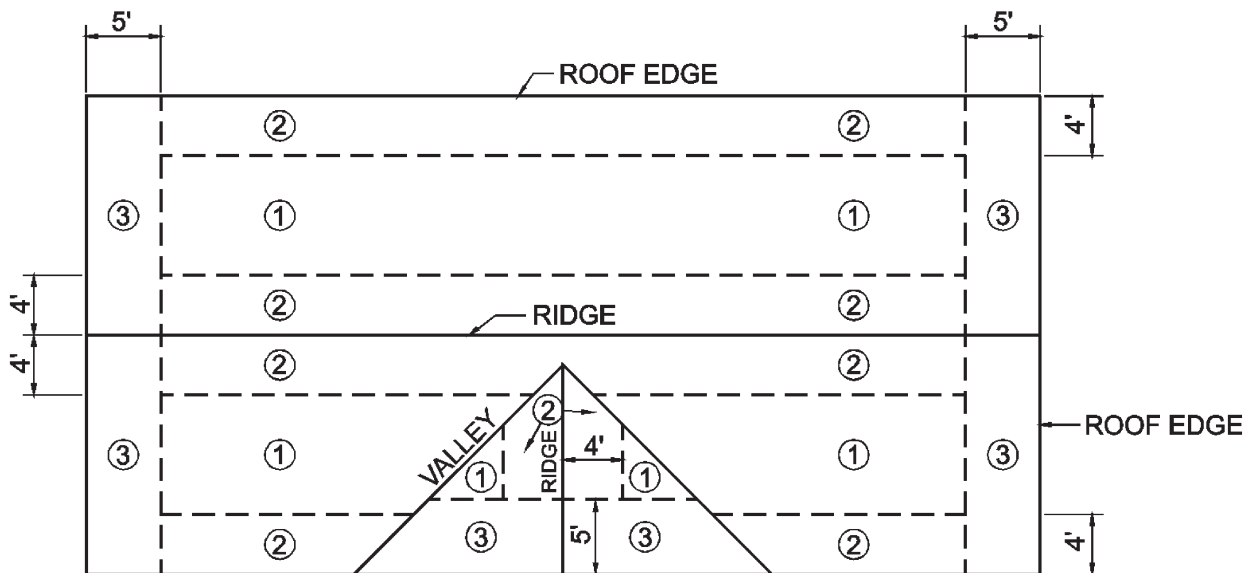
Exception: Attic spaces, designed by a professional engineer or architect licensed to practice in the state, designed to eliminate the attic venting.

R806.2 Minimum area. The total net free ventilating area shall not be less than $\frac{1}{150}$ of the area of the space ventilated except that reduction of the total area to $\frac{1}{300}$ is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to $\frac{1}{300}$ when a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.

R806.3 Vent and insulation clearance. Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

R806.4 Unvented attic assemblies. Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) shall be permitted if all the following conditions are met:

- The unvented attic space is completely contained within the building thermal envelope.
- No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly.
- Where wood shingles or shakes are used, a minimum $\frac{1}{4}$ inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.



**FIGURE R803.2.3.1
ROOF SHEATHING NAILING ZONES**

4. Either Items 4.1, 4.2 or 4.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
 - 4.1 Air-impermeable insulation only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.
 - 4.2 Air-permeable insulation only. In addition to the air-permeable installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in Table R806.4 for condensation control.
 - 4.3 Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R806.4 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

**SECTION R807
ATTIC ACCESS**

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an *attic* access opening to *attic* areas that exceed 30 square feet (2.8 m²) and have a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When the access is located in a ceiling, minimum unobstructed headroom in the *attic* space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical *equipment* is located in *attics*.

**TABLE R806.4
INSULATION FOR CONDENSATION CONTROL**

CLIMATE ZONE	MINIMUM RIGID BOARD ON AIR-IMPERMEABLE INSULATION R-VALUE ^a
1, 2 (All Florida)	R-5

a. Contributes to but does not supersede requirements of the *Florida Building Code, Energy Conservation*.

