



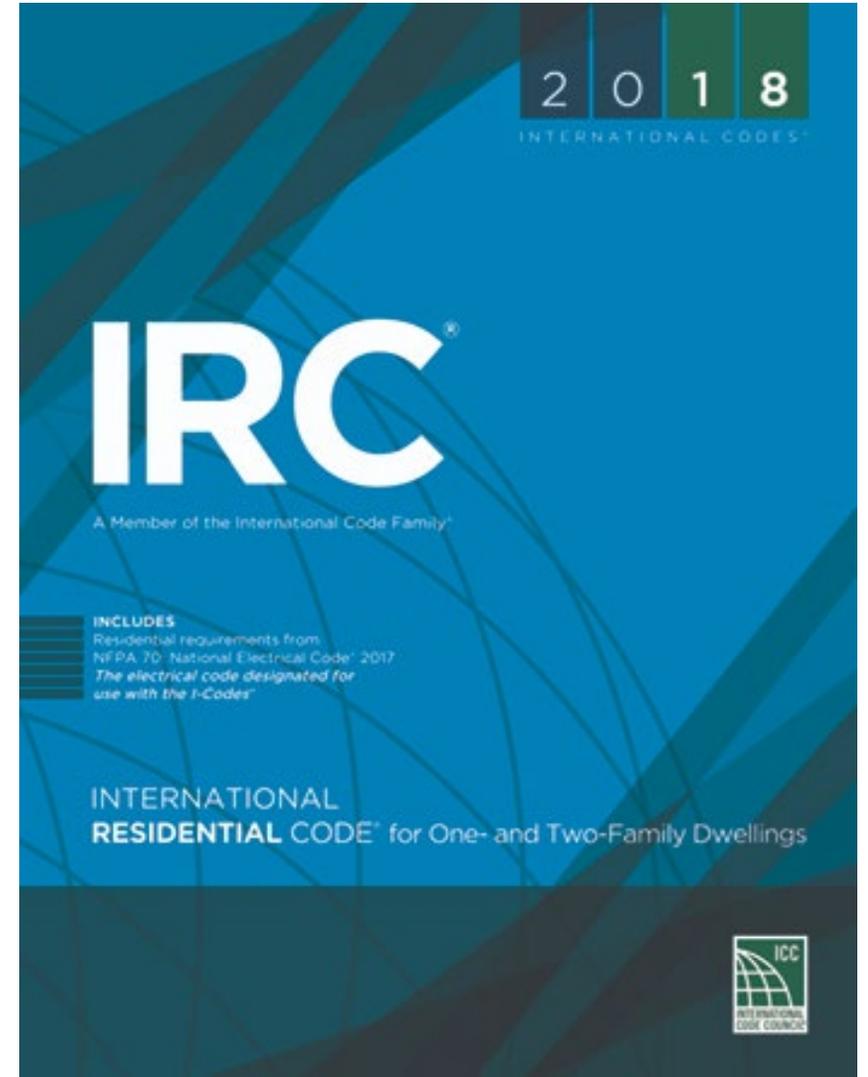
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Montgomery County
Department of Permitting Services



2018 IRC SIGNIFICANT CHANGES Webinar

Montgomery County Amendments and Policies



R202- Definitions

Addition To Section

- **Crawl Space-** An underfloor space that is not a basement.
 - Basement- A story that is not a story above grade plan.
- **Carbon Monoxide Alarm-** A single or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components, and an alarm notification appliance in a single unit.
- **Carbon Monoxide Detector-** A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

R302.1 Exterior Walls

Modification to Tables 302.1(1) Dwelling Without Sprinklers

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 or Section 703.3 of the <i>International Building Code</i> with exposure from both sides	< 5 0 feet 
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber or fire-retardant-treated wood ^{a, b}	≥ 2 feet to < 5 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	N/A	< 3 feet
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

- ~~Roof eave~~ The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fire blocking is provided from the wall top plate to the underside of the roof sheathing.
- ~~Roof eave~~ The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the ~~eave rake overhang where provided~~ eave rake overhang where provided that gable vent openings are not installed.

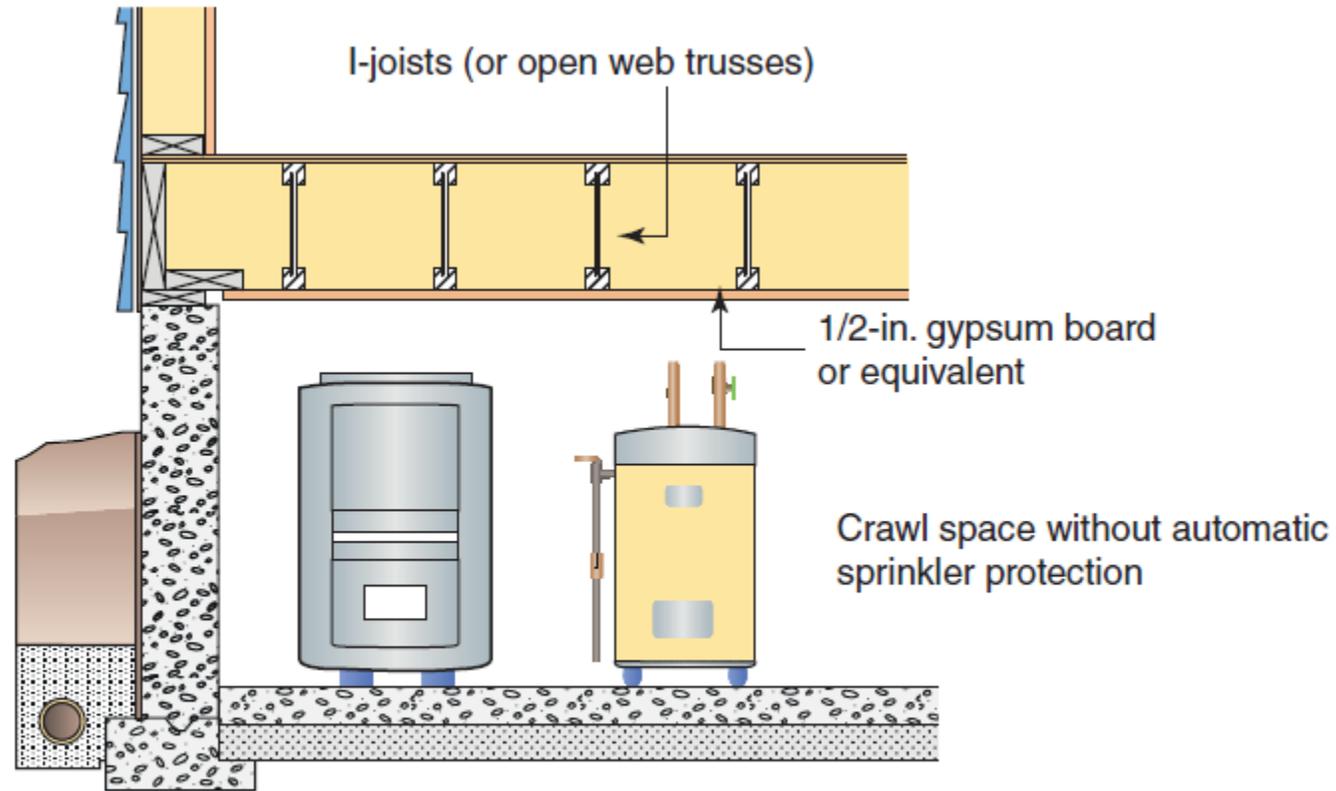
Rake Overhang with Soffit



Germain McDaniel/Shutterstock.com

Gable vent below rake overhang with soffit

R302.13- Fire Protection Of Floors Above Crawl Spaces



Protection required on underside of floor assembly over a crawl space with fuel-fired or electric-powered heating equipment

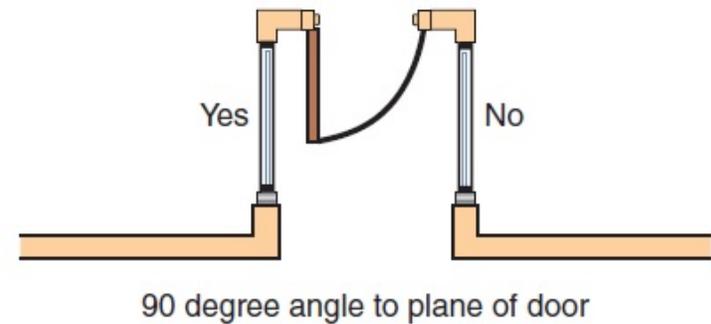
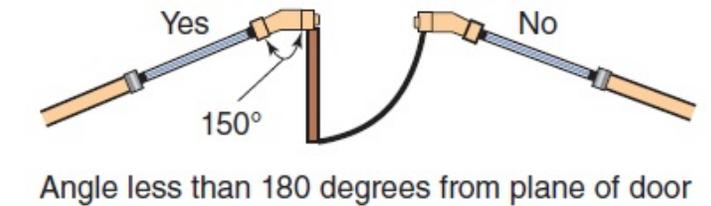
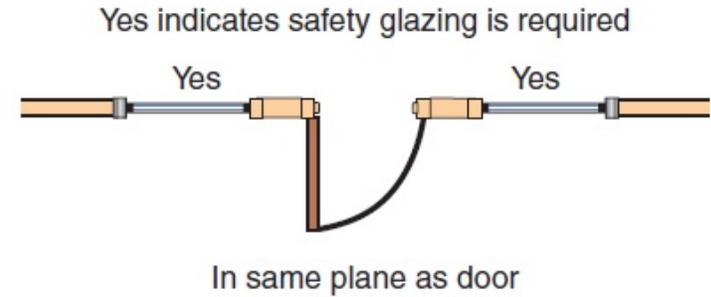
R308.4.2- Glazing Adjacent To Doors

2015 IRC 308.4.2 Glazing Adjacent to Doors

2. Where the glazing is on a wall perpendicular to the plane of the door in a closed position and within 24 inches of the hinge side of an in-swinging door.

2018 IRC 308.4.2 Glazing Adjacent to Doors

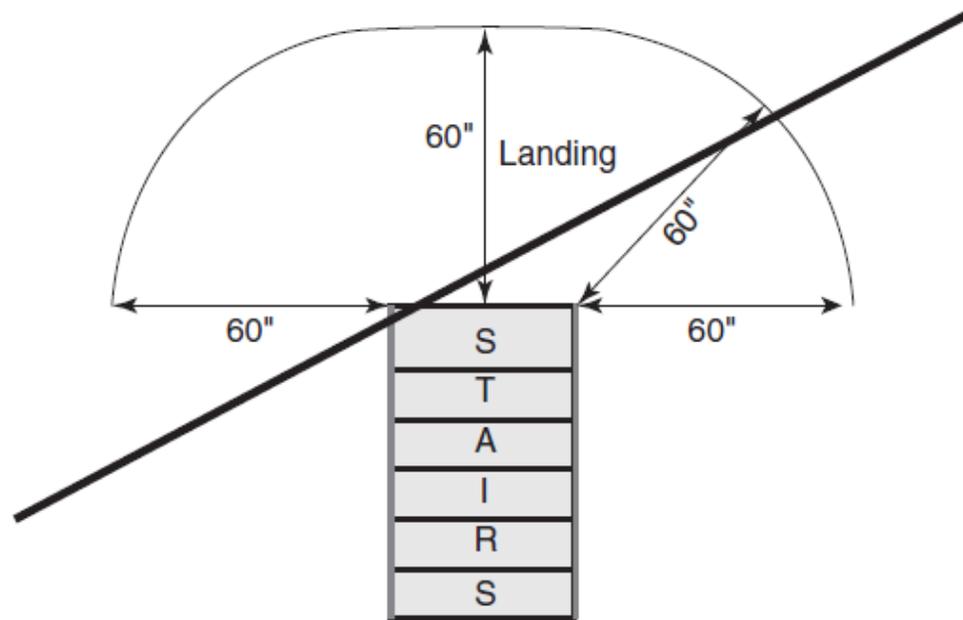
2. Where the glazing is on a wall less than 180 degrees from the plane of the door in a closed position and within 24 inches of the hinge side of a swinging door.



Glazing adjacent to doors

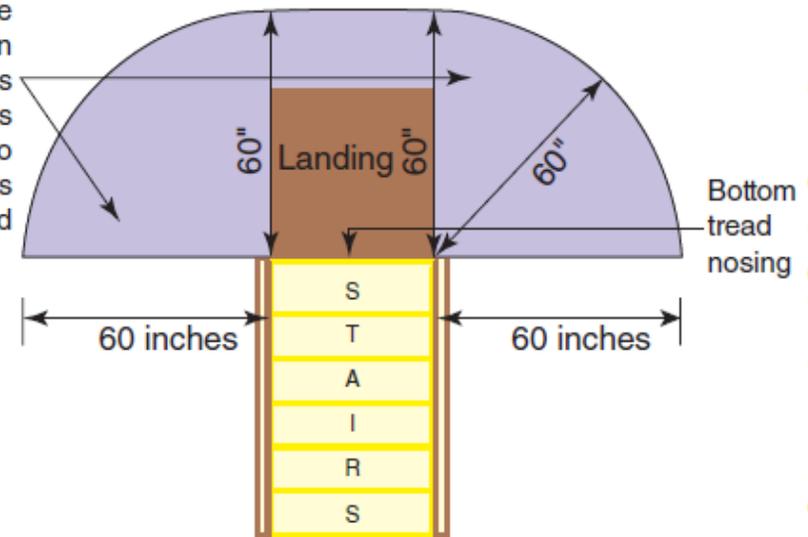
R308.4.7- Glazing Adjacent to Bottom of Stair Landing

Clarification to Section- Figure R308.4.7 has been replaced with a new figure and the caption needed modified to more accurately reflect the related code provision.



Prohibited Hazardous Glazing Locations at Bottom Stair Landings

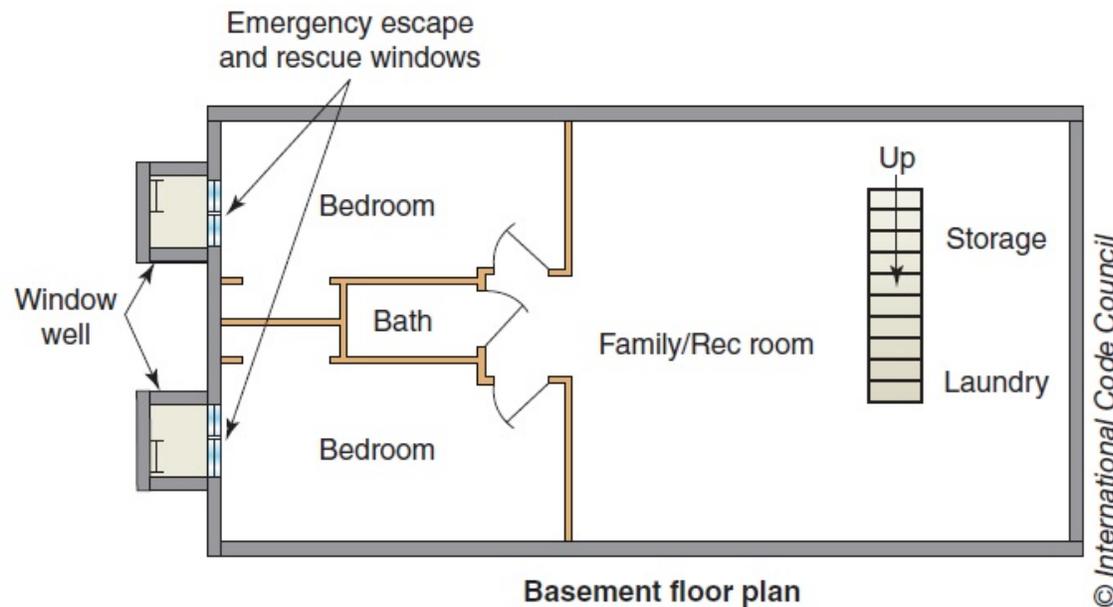
Glazing less than 36" above landings within this area are considered to be in hazardous locations, unless the exception to section R308.4.7 is satisfied



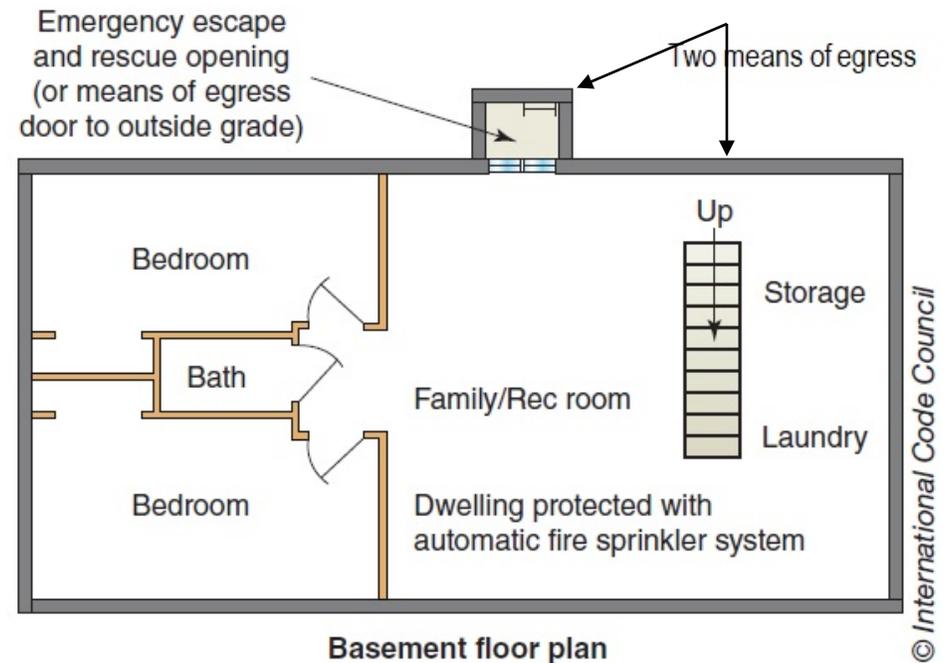
Hazardous Glazing Locations at Bottom Stair Landings

R310.1- Emergency Escape And Rescue Openings

- **Modification To Section-** Emergency escape and rescue openings are no longer required for bedrooms in basements when the dwelling unit is protected with an automatic fire sprinkler system and other conditions are met.



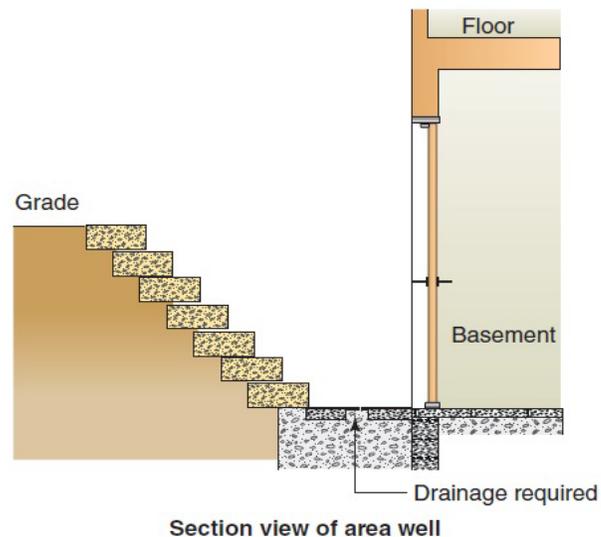
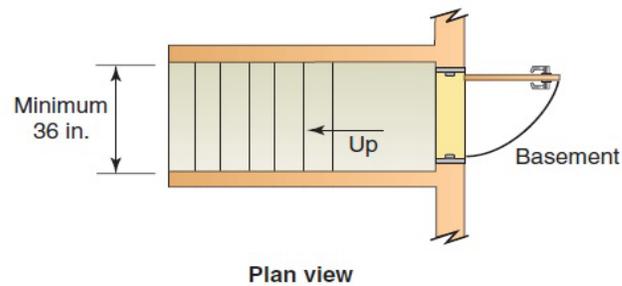
2015 IRC required emergency escape and rescue opening in each bedroom



2018 IRC does not require emergency escape and rescue openings in basement bedrooms when meeting conditions

R310.3- Area Wells For Emergency Escape And Rescue Doors

- **Modification To Section-** For emergency escape and rescue doors in basements, a change in terminology replaces bulkhead enclosures with area wells and provisions for ladders and steps for area wells have been added.



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Door serving as a required emergency escape and rescue opening from a basement with an area well



istock.com/Joe_Potato

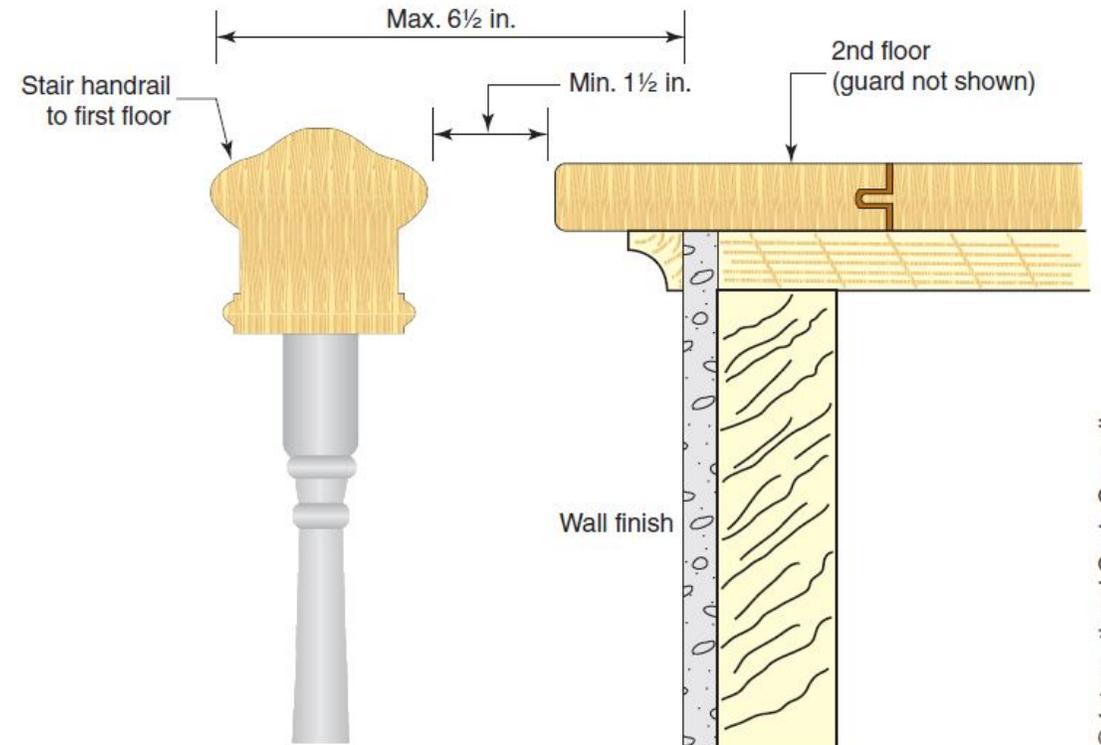
Old-style cellar door and “bulkhead enclosure”

R311.7.8.2- Handrail Projection

- **Modification To Section-** Handrails shall not project more than 4 ½" on either side of the stairway.



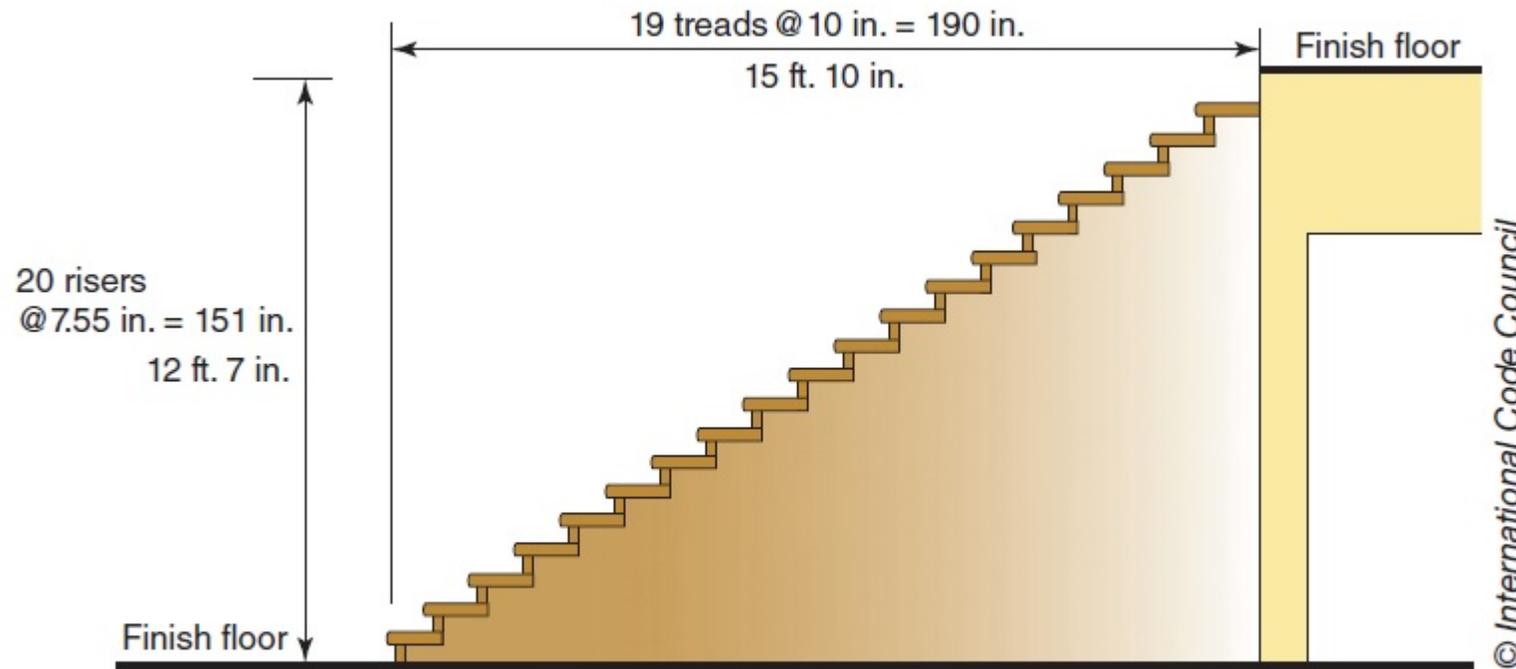
A passing handrail at a tread projection



Greater projection allowed where handrail passes a floor nosing

R311.7.3- Maximum Stair Rise Between Landings

Modification To Section- Maximum rise of a flight of stairs has increased by 4 inches (12' 7").



Maximum 151-inch total rise between floors or landings

R313 Automatic Fire Sprinkler Systems



- **Ex. Reg. 08.00.02.158**
- **Add Subsection R313.4 -Automatic sprinkler system for reconstruction**

An approved automatic fire sprinkler system must be installed when 50 percent or more of the gross floor area of the existing building, excluding basements, is demolished or if 50 percent or more of the existing exterior walls above the foundation walls calculated in linear feet by each story are demolished. Gross floor area is the floor area within the inside perimeter of the exterior walls of the building exclusive of vent shafts and courts, without deduction for corridors, hallways, stairways, ramps, closets, thickness of interior walls, columns and other features. The length of the exterior wall is measured from corner to corner on the exterior side of the wall. An existing wooden wall is defined as unaltered bottom plate, top plate, studs and sheathing.

R314 - Smoke Alarms and R314.4 Interconnection

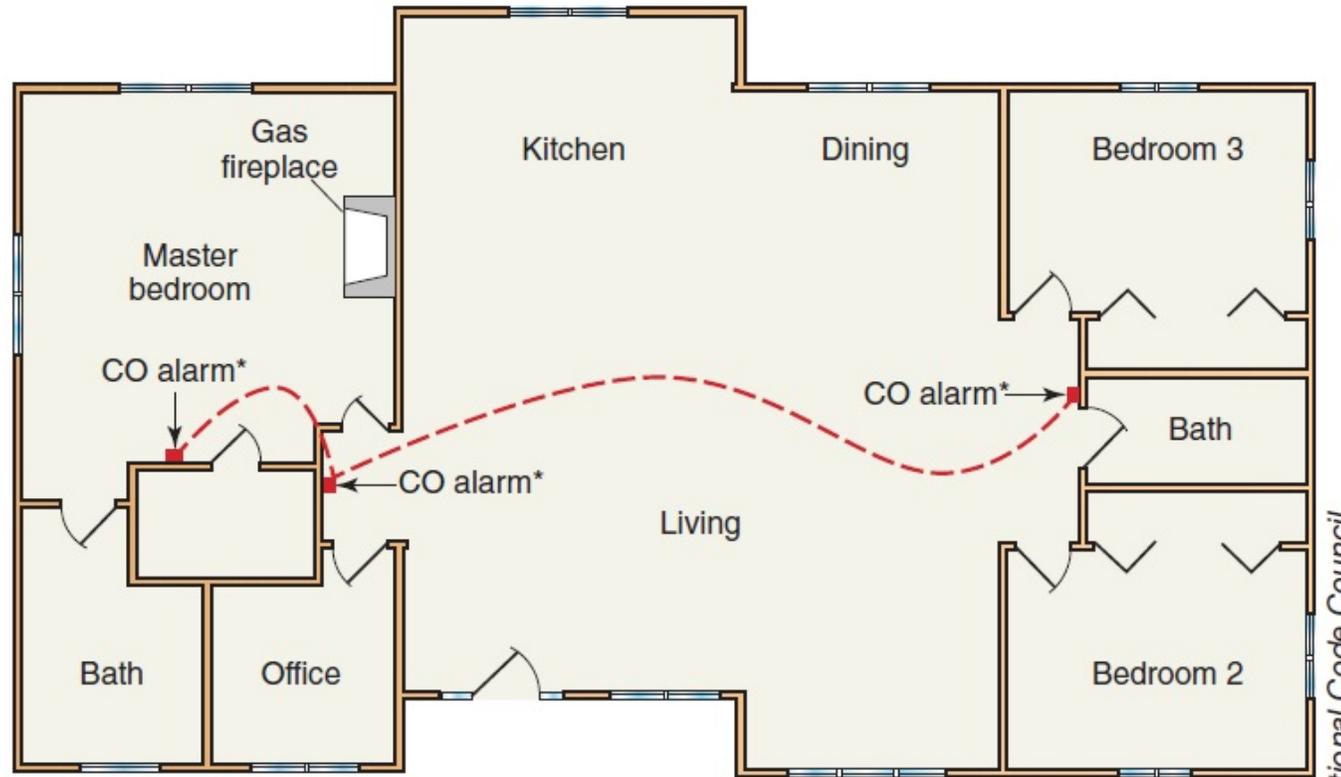
- **Modification To Section-** The exemption for interconnection of smoke alarms during alterations based on feasibility has been removed from the code.

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

~~**Exception:** Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.~~

R315- Carbon Monoxide Alarms

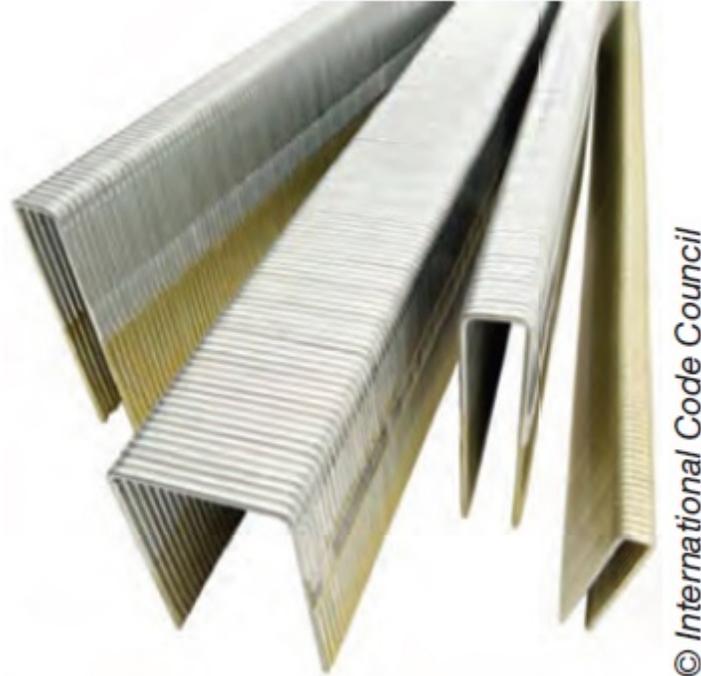
- **Modification To Section** - Interconnection is now required where multiple carbon monoxide alarms are required in a dwelling unit.



*CO alarm may be a combination CO and smoke alarm

R317.3- Fasteners In Treated Wood

- **Modification To Section** - Staples in preservative-treated wood and fire-retardant wood are now required to be made of stainless steel.



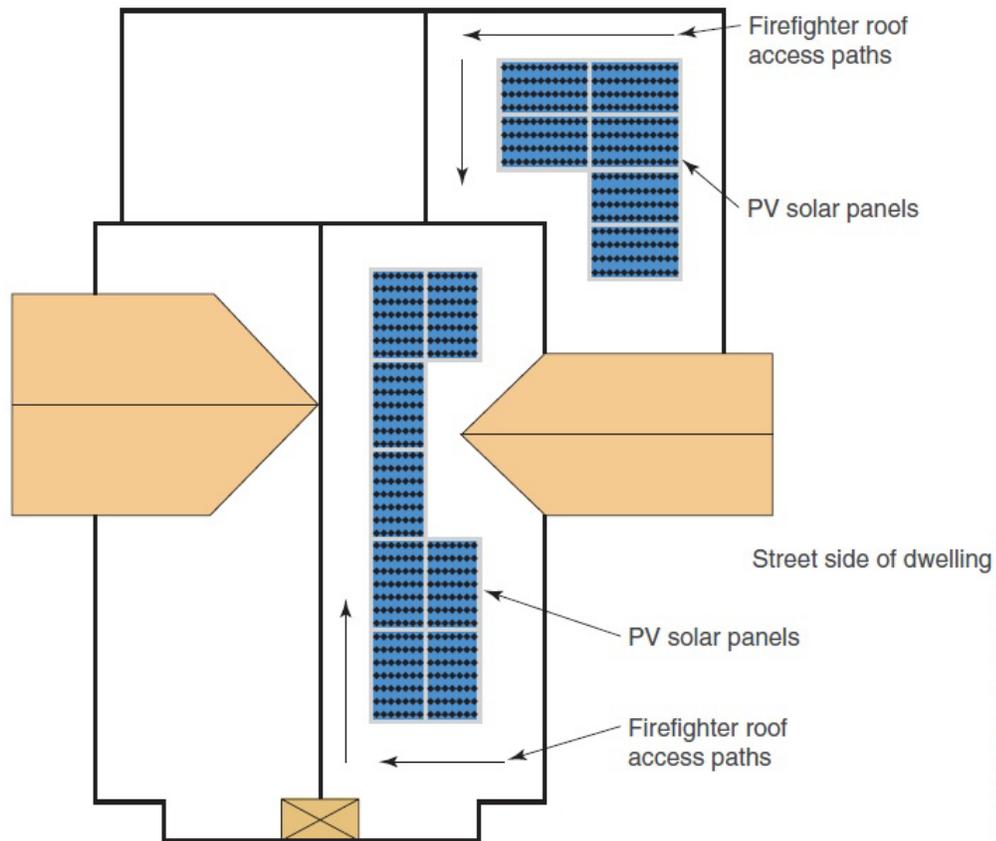
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Stainless steel staples

R324.6- Roof Access and Pathways

Photovoltaic Solar Energy Systems

- **Addition to Section** - Access and minimum spacing shall be required to provide emergency access to the roof, to provide pathways to specific areas of the roof, provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof.



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TABLE 3-1 Minimum Ridge Setback

Array Percent of Roof Area	Fire Sprinkler System	Minimum Setback on Both Sides of Ridge (inches)
≤ 33 %	No	18
> 33%	No	36
≤ 66 %	Yes	18
> 66%	Yes	36

Required roof access and pathways for firefighters for roof-mounted PV solar systems

R325.6- Habitable Attics

- **Addition To Section** - The definition of habitable attic has been revised and the technical requirements have been placed in a new section.



iStock.com/northlightimages

Finishing off an attic for habitable space

A habitable attic **shall not be considered a story** when complying with all of the following requirements:

- The occupiable floor area is not less than 70 square feet, in accordance with Section R304.
- The occupiable floor area has a ceiling height in accordance with Section R305.
- The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.
- The floor of the occupiable space shall not extend beyond the exterior walls of the floor below.

R408.3- Unvented Crawl Spaces

- **Modification To Section** - Ventilation of the under-floor space is not required when an adequately-sized dehumidifier is provided.



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An unvented crawlspace requires moisture removal

R507- Exterior Decks

- **Modification To Section** - R507 Has been reorganized for ease of use and additional provisions are added to simplify prescriptive construction of a deck.

TABLE 5-1 Deck Section Reorganization

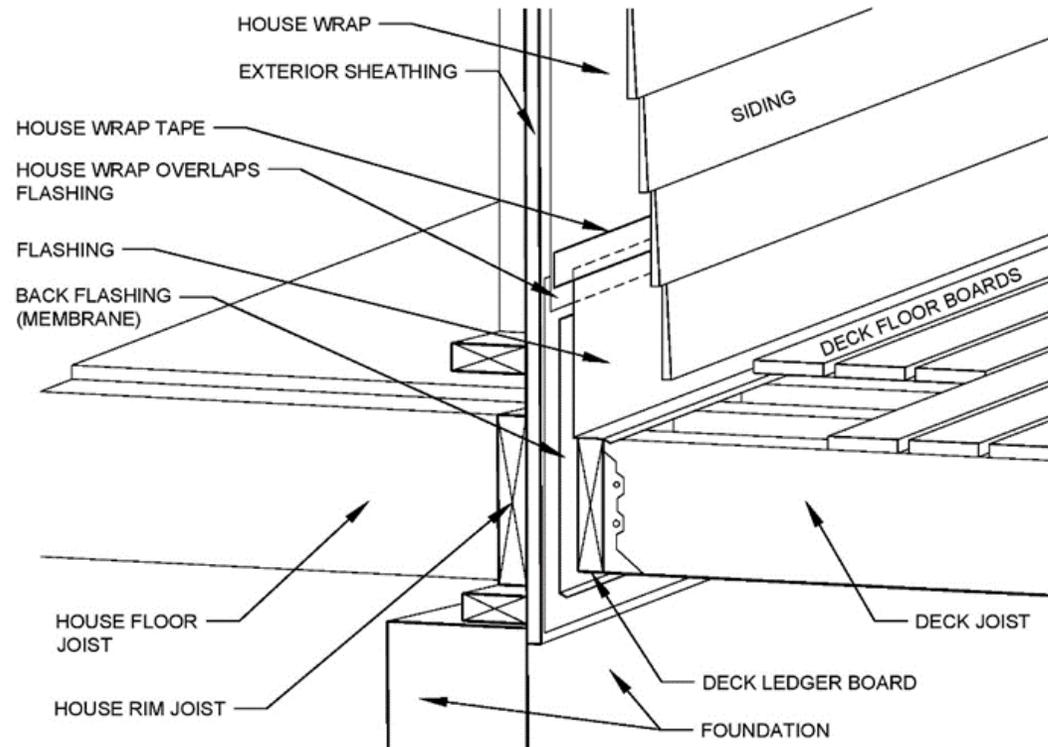
2018 IRC Section Numbers		2015 IRC Section Numbers		2012 IRC Section Numbers	
Section	Topic	Section	Topic	Section	Topic
R507.1	Decks	R507.1	General	R507.1	Decks
R507.2	Materials	New			
R507.2.1	Wood materials				
R507.2.1.1	Engineered wood products				
R507.2.2	Plastic composite elements	R507.3	Plastic composite elements	R507.3	Wood/plastic composites
R507.2.2.1	Labeling	R507.3.1	Labeling	New	
R507.2.2.2	Flame spread	R507.3.2	Flame spread		
R507.2.2.3	Decay	R507.3.3	Decay		
R507.2.2.4	Termites	R507.3.4	Termites		
R507.2.2.5	Installation	R507.3.5	Installation	R507.3.1	Wood/plastic composites
R507.2.3	Fasteners and connectors	New			
R507.2.4	Flashing	New			
R507.2.5	Alternate materials	New			
R507.3	Footings	New			
R507.3.1	Minimum size				
R507.3.2	Minimum depth				
R507.4	Posts	R507.8	Posts	New	
R507.4.1	Post to footing	R507.8.1	Post to footing		
R507.5	Beams	R507.6	Beams	New	
R507.5.1	Beam bearing	R507.7	Beam bearing		
R507.5.2	Beam connection to supports	R507.7.1	Post to beam		

2018 IRC Section Numbers		2015 IRC Section Numbers		2012 IRC Section Numbers	
Section	Topic	Section	Topic	Section	Topic
R507.1	Decks	R507.1	General	R507.1	Decks
R507.6	Joists	R507.5	Joists	New	
R507.6.1	Joist bearing	R507.7	Joist bearing		
R507.6.2	Lateral restraint	R507.5.1	Lateral restraint		
R507.7	Decking	R507.4	Decking	New	
R507.8	Vertical and lateral supports	New			
R507.9	Vertical and lateral support at band joists	R507.1, R507.2	Decks, Deck ledger connection	R507.2	Ledger to connection
R507.9.1	Vertical support	New			
R507.9.1.1	Ledger	R507.2.1	Ledger details	New	
R507.9.1.2	Band joist	R507.2.2	Band joist	New	
R507.9.1.3	Ledger to band joist	R507.2.3	Ledger to band joist	R507.2, R507.2.1	Ledger - band joist conn., Placement of lag screws
R507.9.1.4	Alternate ledger details	R507.2	Deck ledger connection	R507.2.2	Alternate ledger connection
R507.9.2	Lateral connection	R507.2.4	Deck lateral load connection	R507.2.3	Deck lateral load connection

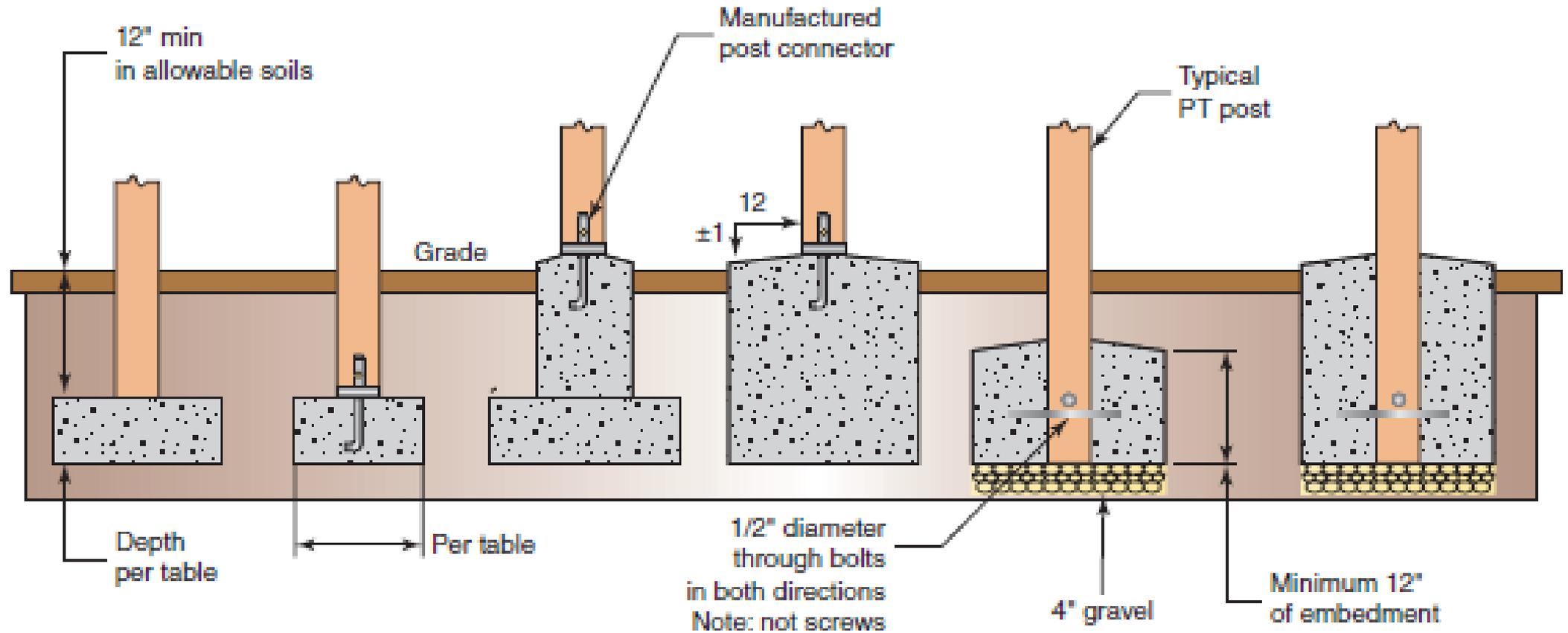
A last note on terminology within this section, a lateral load in Section R507 is described as a horizontal load.

R507.2.4- Flashing

- **Modification To Section** - Flashing shall be a corrosion-resistant metal of nominal thickness not less than 0.019 inch or approved nonmetallic material that is compatible with the substrate of the structure and the decking materials.



R507.3 Deck Post to Deck Footing Connection

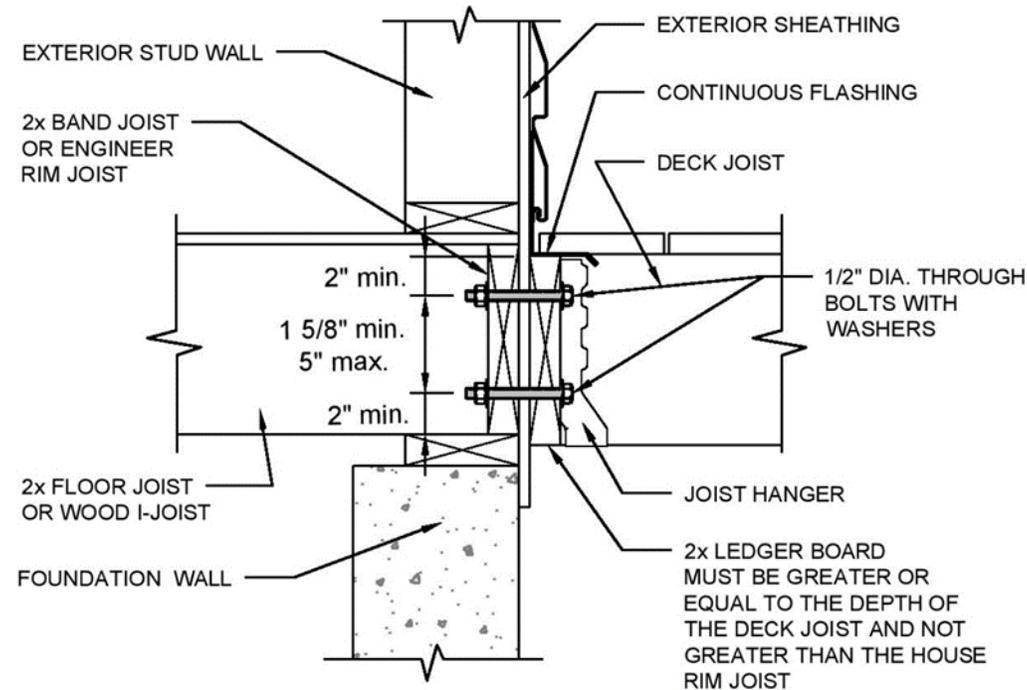


Note: Posts must be centered on or in footing.

Deck post to deck footing connection

R507.9.1.4 Deck Ledger Connection

- **Ex. Reg. 08.00.02.172 Subsection R507.9.1.4** The deck ledger must be connected to the building's band board or rim board with through bolts, or the deck must be self supporting.



R507.4- Deck Posts

TABLE R507.8 R507.4 Deck Post Height

Deck Post Size	Maximum Height ^{a,b} (feet-inches)
4 × 4	<u>6-9^c</u>
4 × 6	8
6 × 6	14
<u>8 × 8</u>	<u>14</u>

For SI: 1 foot = 304.8 mm.

- a. Measured to the underside of the beam.
- b. Based on 40 psf live load.
- c. The maximum permitted height is 8 feet for one-ply and two-ply beams. The maximum permitted height for three-ply beams on post cap is 6 feet 9 inches.



Deck post with cap

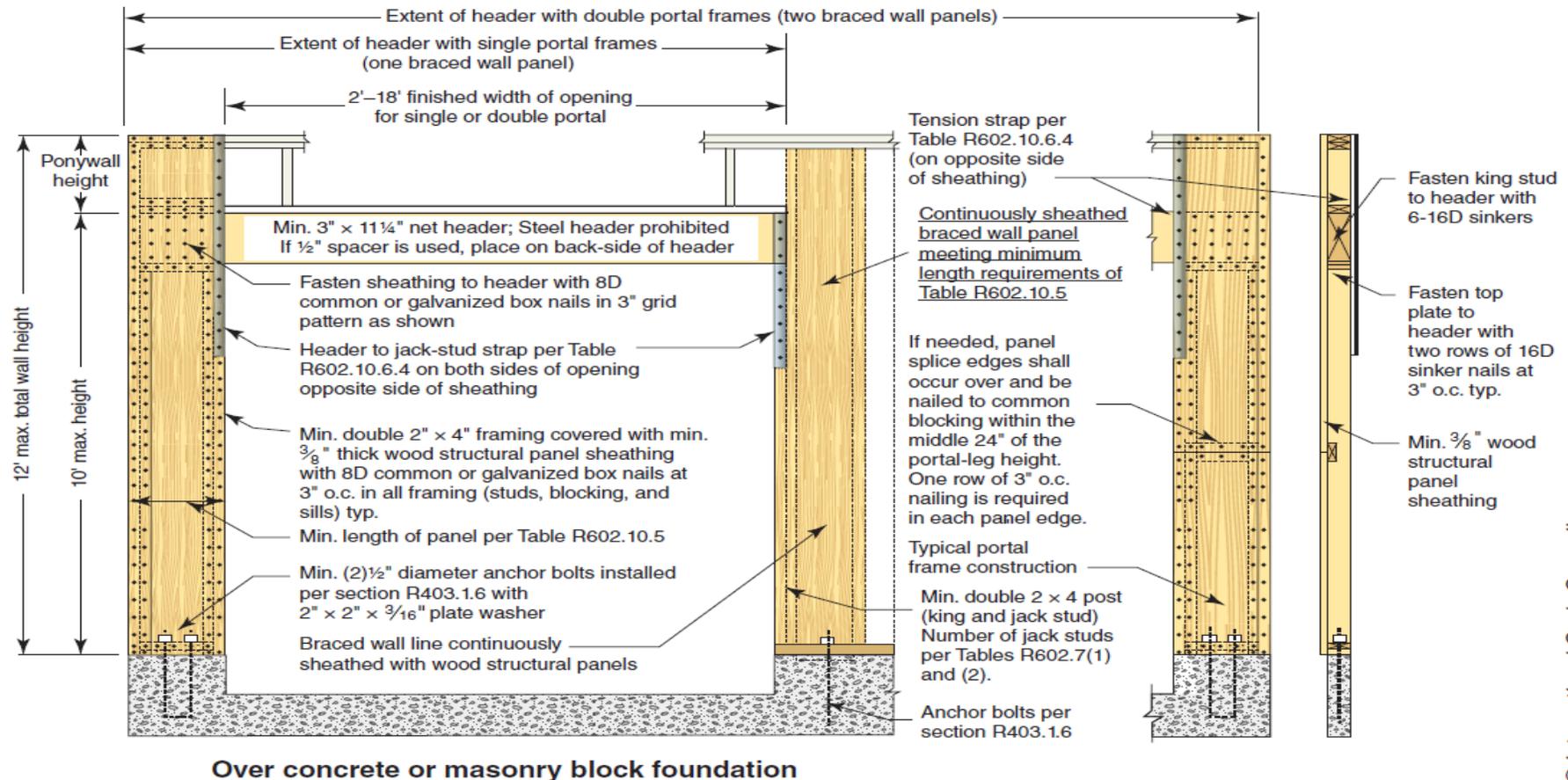
R507.5 Deck Beam Span Lengths

TABLE R507.6 R507.5 Deck Beam Span Lengths^{a, b, g} (feet-inches)

Species ^c	Size ^d	Deck Joist Span Less Than or Equal to (feet)						
		6	8	10	12	14	16	18
Southern Pine	1 – 2 × 6	4-11	4-0	3-7	3-3	3-0	2-10	2-8
	1 – 2 × 8	5-11	5-1	4-7	4-2	2-10	3-7	3-5
	1 – 2 × 10	7-0	6-0	5-5	4-11	4-7	4-3	4-0
	1 – 2 × 12	8-3	7-1	6-4	5-10	5-5	5-0	4-9
	2 – 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 – 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 – 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 – 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 – 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 – 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 – 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 – 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10

R602.10.6.4- CS-PF

Modification to Section- CS-PF has been modified slightly in this code edition. A note is added emphasizing that when a single CS-PF is built, the side of the portal frame that has a post must have continuous sheathing beyond that end of the portal frame.



Method CS-PF—Continuously Sheathed Portal Frame Panel Construction

R703.2- Water Resistive Barrier

- **Modification to Section** - Water-resistive barrier materials other than No.15 asphalt felt must be installed following the manufacturer's installation instructions. The exemption for detached accessory building is deleted.

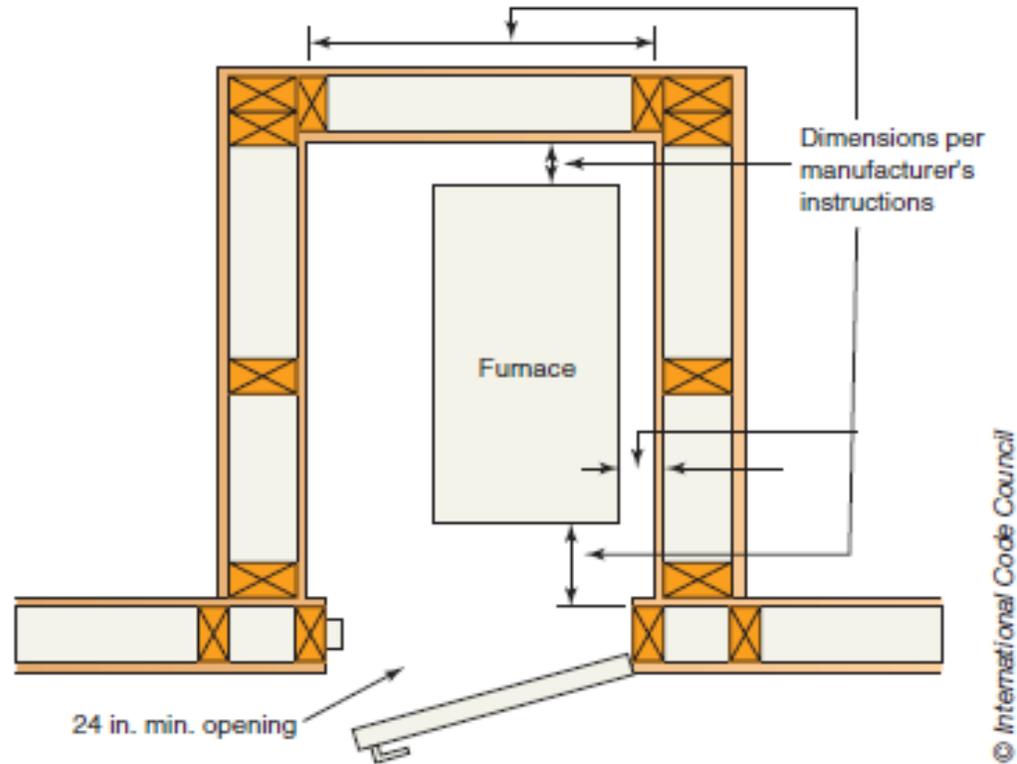


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Water resistive barrier

M1305.1.1- Access to Furnaces within Compartments

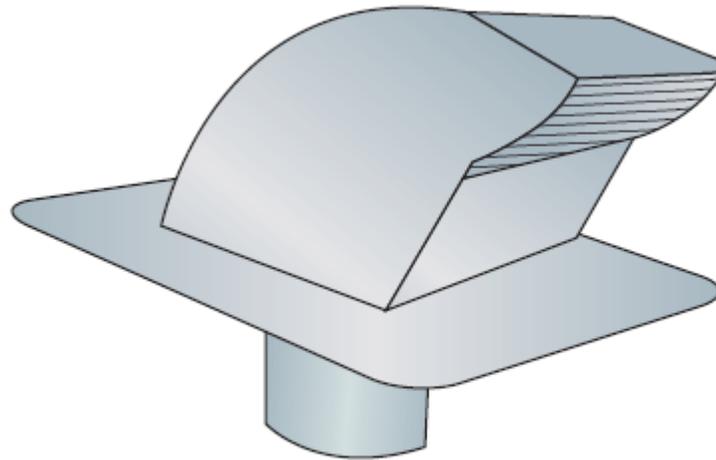
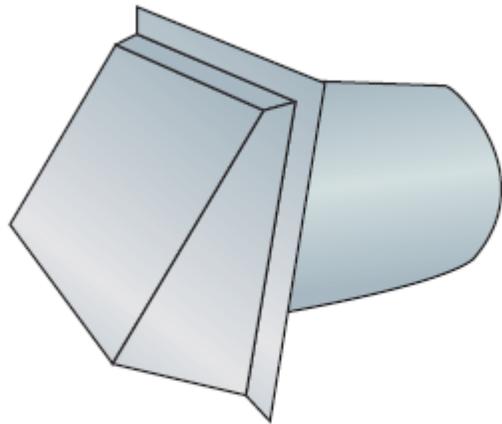
- **Deletion of Section** - The appliance access requirements for furnaces in compartments has been removed from the code in favor of other code provisions and the manufacturer's instructions



The access and clearance requirements for furnaces in compartments have been removed in favor of the manufacturer's instructions.

M1502.3.1- Dryer Exhaust Duct Termination

- **Modification to Section** - A minimum area of 12.5 square inches has been established for the terminal outlet of dryer duct exhaust

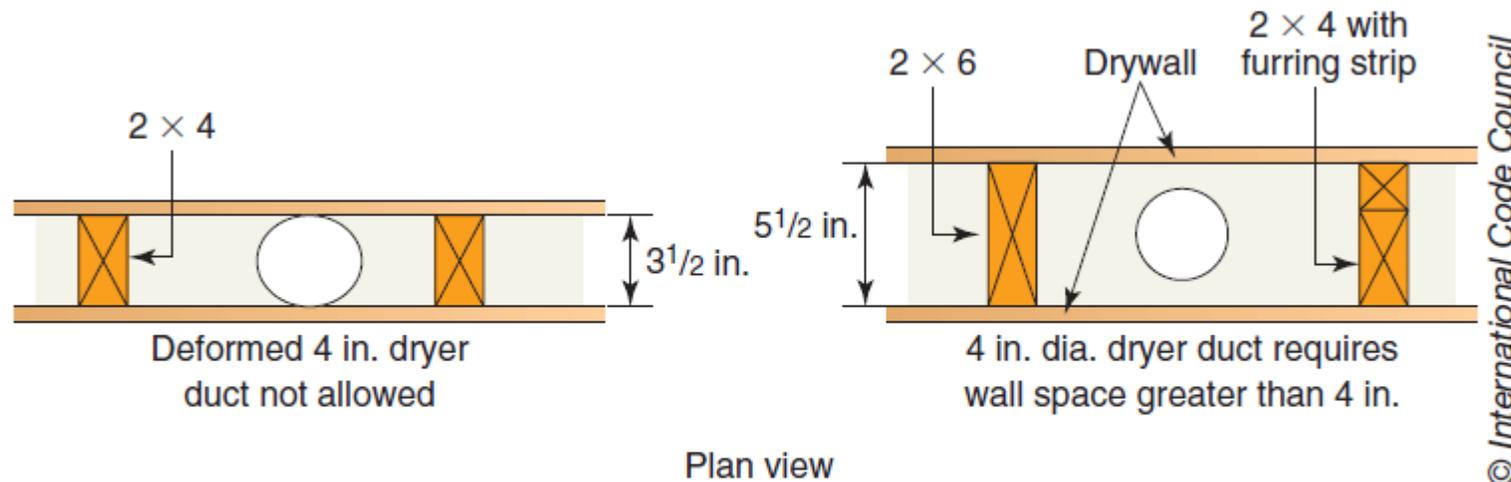


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Wall and roof terminations for dryer exhaust must be undiminished in size and provide 12.5 square inches of area.

M1502.4.2- Concealed Dryer Exhaust

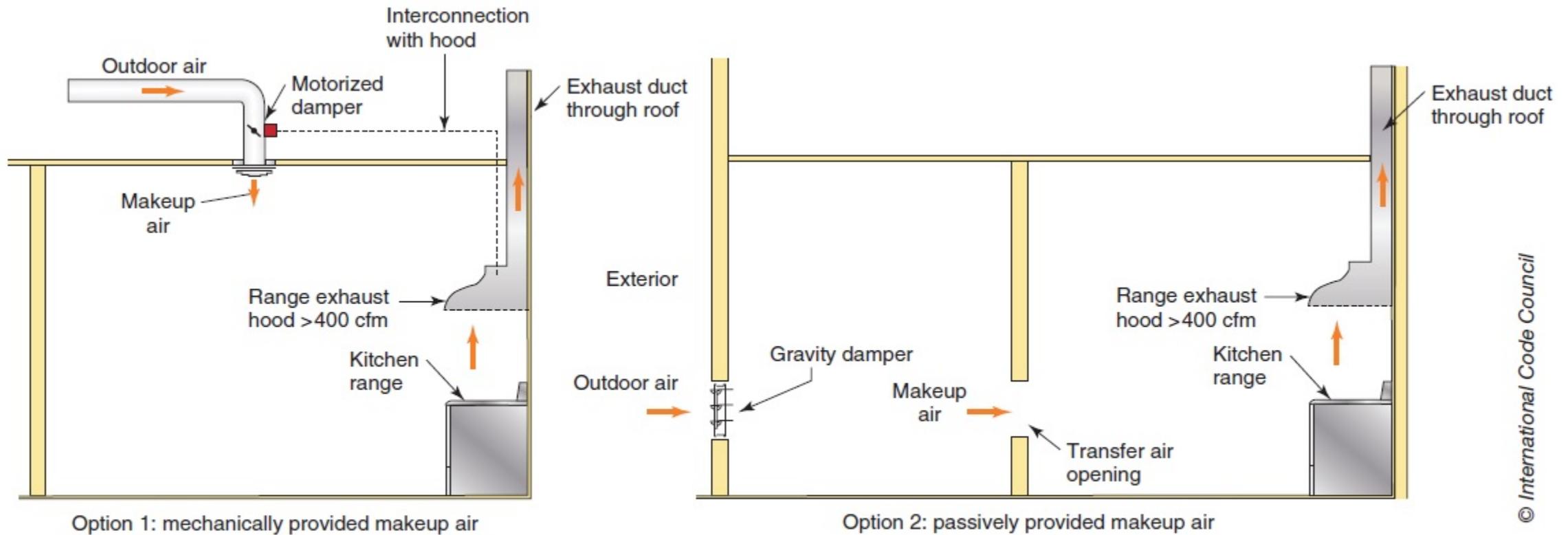
- **Modification to Section** - Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.



Dryer exhaust duct in concealed spaces

M1503.6- Makeup Air for Kitchen Exhaust Systems

Modification to Section - Makeup air for domestic cooking exhaust systems is no longer required if all fuel burning appliances in the dwelling unit have a direct vent or mechanical draft system



Makeup air is required for exhaust rates greater than 400 cfm unless all fuel-fired appliances are direct vent or mechanical draft.

Appendix Q- Tiny Houses

- **New Appendix-** A new Appendix Q covers provisions for tiny houses, defined as dwellings that is 400 SQ.FT or less in floor area excluding lofts.

TABLE A-1

Element	General requirement
Egress roof access window	A skylight or roof window for emergency escape from a loft
Loft	Open on one side with a ceiling height of less than 6 feet 8 inches
Tiny house	Maximum area 400 square feet excluding lofts
Ceiling heights	Generally 6 feet 8 inches or less
Minimum loft area	35 square feet with 5-foot minimum dimension
Stairway	Width: 17 to 25 inches Headroom: 6 feet 2 inches Risers: 7 to 12 inches Treads: Calculated based on riser height
Ladders	Width: 12 inches Rung spacing: 10 to 14 inches Incline 70 to 80 degrees
Loft guard height	One-half of the clear height to ceiling Not required to be over 36 inches



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Thank you!