Description
- This seminar reviews and analyzes selected significant changes from the 2012 IRC to the 2015 IRC.
- It assists code users in identifying the specific code changes that have occurred, and more importantly, understanding the reason behind the change.
- It focuses on those code changes selected due to their frequency of application, special significance or change in application.

Objectives
- Upon completion, participants will be better able to:
  - Identify the most significant differences between the 2012 IRC and the 2015 IRC.
  - Explain the differences between the current and previous edition.
  - Identify key changes in organization and code requirements.
  - Identify the applicability of design, plan review and inspection requirements.

Welcome
- Rules for the course,
- Breaks,
- Restroom location.
- Introduction of instructor and participants.
- Other
R101.2, R202 Scope—Accessory Structures

Change Type: Modification
- The maximum height for accessory structures has been increased from two to three stories above grade plane. Technical requirements have been removed from the definition, and accessory structures are now permitted to be unlimited in area.

Accessory Structure.
- A structure that is accessory to and incidental to that of dwelling(s) and which is located on the same lot.

R104.11 Alternative Materials, Design, and Methods of Construction and Equipment

Change Type: Addition
- When proposed alternatives are not approved, the reason for the disapproval must be stated in writing by the building official.
**R105.3.1.1 Existing Buildings in Flood Hazard Areas**

**Change Type:** Modification

- Determination of substantial improvement for existing buildings in flood hazard areas is the responsibility of the building official. The related provisions are now consolidated in Section R105.3.1.1.

**R106.1.4 Information for Construction in Flood Hazard Areas**

**Change Type:** Modification

- Construction documents for dwellings in Coastal A Zones shall include the elevation of the bottom of the lowest horizontal structural member.

**Table R301.2(1) Climatic and Geographic Design Criteria**

**Change Type:** Modification

<table>
<thead>
<tr>
<th>Ground Snow Load Speed(^a) (Mph)</th>
<th>Topographic effects(^a)</th>
<th>Special wind region(^b)</th>
<th>Wind borne debris zone(^a)</th>
<th>Seismic Design Category(^d)</th>
</tr>
</thead>
</table>

*Portions of table and footnotes not shown remain unchanged*

1. In accordance with Figure R301-264(A), where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
2. In accordance with Section R301.1.5.3.1, the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
R301.2 Wind Design Criteria

Change Type: Modification
- Ultimate design wind speed values replace basic wind speed values for 3-sec gust wind speeds in Section R301.2.1. A wind speed conversion table has been added for conversion from ultimate design to nominal design wind speeds.

<table>
<thead>
<tr>
<th>$V_{u}$</th>
<th>110</th>
<th>115</th>
<th>120</th>
<th>125</th>
<th>130</th>
<th>135</th>
<th>140</th>
<th>145</th>
<th>150</th>
<th>155</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{u}$</td>
<td>85</td>
<td>89</td>
<td>93</td>
<td>98</td>
<td>101</td>
<td>105</td>
<td>110</td>
<td>115</td>
<td>120</td>
<td>125</td>
</tr>
</tbody>
</table>

For SI: 1 mile per hour = 0.447 m/s.
- Linear interpolation is permitted

R301.2 Wind Speed Maps

Change Type: Modification
### Table R301.2(2) Component and Cladding Loads

<table>
<thead>
<tr>
<th>Change type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE R301.2(2)</strong> Component and Cladding Loads for a Building with a Mean Roof Height of 30 Feet Located in Exposure B [ASD] (psf)</td>
</tr>
<tr>
<td>Effective Wind Area (feet²)</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Roof 0 to 2 degrees</td>
</tr>
<tr>
<td>Roof &gt; 2 to 27 degrees</td>
</tr>
<tr>
<td>Roof &gt; 27 to 45 degrees</td>
</tr>
<tr>
<td>Wall</td>
</tr>
</tbody>
</table>

### R301.2.1.1.1 Sunrooms

**Change Type:** Addition

- The 2015 IRC requires sunrooms to comply with AAMA/NPEA/NSA 2100-12. The standard contains requirements for habitable and nonhabitable sunrooms.

### Table R301.2(2) Component and Cladding Loads

**TABLE 3.1** Comparison of Roof Angle Categories

<table>
<thead>
<tr>
<th>2015 IRC</th>
<th>2000–2012 IRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 7 degrees</td>
<td>0 to 10 degrees</td>
</tr>
<tr>
<td>Greater than 7 to 27 degrees</td>
<td>Greater than 10 to 30 degrees</td>
</tr>
<tr>
<td>Greater than 27 to 45 degrees</td>
<td>Greater than 30 to 45 degrees</td>
</tr>
</tbody>
</table>

### R301.2.1.1.1 Sunrooms

**Category I:** A thermally isolated sunroom

- Walls open or enclosed
- Insect screening or 20 mil maximum thickness plastic film
- Nonhabitable and unconditioned.
### R301.2.1.1.1 Sunrooms

**Category II:** A thermally isolated sunroom with enclosed walls.
- Openings are enclosed with translucent or transparent plastic or glass
- Nonhabitable and unconditioned

**Category III:** A thermally isolated sunroom with enclosed walls.
- Openings are enclosed with translucent or transparent plastic or glass
- Fenestration complies with:
  - Water-penetration resistance
  - Air infiltration resistance
- Nonhabitable and unconditioned

**Category IV:** A thermally isolated sunroom with enclosed walls.
- Heated or cooled by a separate temperature control or system
- Thermally isolated
- Fenestration complies with:
  - Water penetration resistance
  - Air infiltration resistance
  - Thermal performance.
- Nonhabitable and conditioned

**Category V:** A sunroom with enclosed walls.
- Designed to be heated or cooled
- Open to the main structure
- Fenestration complies with:
  - Water-penetration resistance
  - Air infiltration resistance
  - Thermal performance.
- Habitable and conditioned
R301.2.1.2 Protection of Openings in Wind Borne Debris Regions

Change Type: Modification
- Requirements for glazed openings to be protected from wind borne debris have been clarified by the addition of a new section detailing changes to the ASTM E 1996 standard.

R301.2.1.4 Wind Exposure Category

Change Type: Modification
- In the 2012 IRC, Wind Exposure Category D applied to regions adjacent to open water in non-hurricane-prone regions.
- Wind Exposure Category D now applies to open water, mud and salt flats, and unbroken ice fields.

R301.2.1.4 Wind Exposure Category

Change Type: Modification
- Exposure Category D also applies in hurricane-prone regions to residences on or near the ocean shore.
Table R301.2.1.5.1 Modifications for Topographic Wind Effects

<table>
<thead>
<tr>
<th>Ultimate Design Wind Speed (mph)</th>
<th>Average Slope of the Top Half of Hill, Ridge, or Encroachment (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.10 0.125 0.15 0.175 0.20 0.23 0.25</td>
</tr>
<tr>
<td>110</td>
<td>132 137 142 147 152 158 162</td>
</tr>
<tr>
<td>115</td>
<td>138 143 148 154 159 165 169</td>
</tr>
<tr>
<td>120</td>
<td>144 149 155 160 166 172 176</td>
</tr>
<tr>
<td>130</td>
<td>152 162 169 174 179 N/A N/A</td>
</tr>
<tr>
<td>140</td>
<td>168 174 181 N/A N/A N/A N/A</td>
</tr>
<tr>
<td>150</td>
<td>180 N/A N/A N/A N/A N/A N/A</td>
</tr>
</tbody>
</table>

Table applies to structures 300 feet or less and dwellings within a distance equal or greater than half the structure height.

R301.3 Story Height

**Change Type:** Modification

- Individual walls or walls studs shall be permitted to exceed [Section R301.3] limits as permitted by Chapter 6 provisions, provided that story heights are not exceeded.

R301.2.4 Floodplain Construction

**Change Type:** Modification

- Buildings located in a flood hazard area must comply with the provisions for the most restrictive flood hazard area and may use ASCE 24 for design.

R302.1 Exterior Walls

**Change Type:** Modification
**R302.1 Exterior Walls**

**Change Type:** Modification

<table>
<thead>
<tr>
<th>Exterior Wall Element</th>
<th>Minimum Fire-Resistance Rating</th>
<th>Minimum Fire Separation Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>1-hour tested in accordance with ASTM E 119 or UL 263 with exposure from the outside.</td>
<td>6 feet</td>
</tr>
<tr>
<td>Projections</td>
<td>Not allowed</td>
<td>3 feet*</td>
</tr>
<tr>
<td>Opener in walls</td>
<td>Not allowed</td>
<td>3 feet*</td>
</tr>
<tr>
<td>Penetrations</td>
<td>All</td>
<td>3 feet*</td>
</tr>
</tbody>
</table>

*For 6 In. = 600 mm

**R302.2 Townhouse Separation**

**Change Type:** Modification

- The provisions for separating townhouses with structurally independent fire-resistant-rated walls in accordance with Section R302.1 have been removed in favor of the common wall provisions of Section R302.2.
- Common walls separating townhouses must now be rated for 2 hours when an automatic fire sprinkler system is not installed in the townhouse dwelling units.

**R302.13 Fire Protection of Floors**

**Change Type:** Clarification

- The provisions for fire protection of floors have been relocated from Chapter 5 to the fire-resistant construction provisions of Section R302.
- New language clarifies that the code does not regulate penetrations or openings in the fire protection membrane.
**R303.7, R303.8 Stairway Illumination**

**Change Type:** Clarification

- Interior and exterior stairway illumination provisions have been placed in separate sections. Conflicting language has been removed to clarify the requirements.

**R305 Ceiling Height**

**Change Type:** Modification

- The minimum ceiling height for bathrooms, toilet rooms, and laundry rooms has been reduced to 6 feet 8 inches. The exception for allowing beams, girders, ducts, or other obstructions to project to within 6 feet, 4 inches of the finished floor has been expanded to include basements with habitable space.

**R304.1 Minimum Habitable Room Area**

**Change Type:** Modification

- The requirement for one habitable room with a minimum floor area of 120 square feet has been removed from the code.

**R308.4.2 Glazing Adjacent to Doors**

**Change Type:** Modification

- Glazing installed perpendicular to a door in a closed position and within 24 inches of the door only requires safety glazing if it is on the hinge side of an in-swinging door.
R308.4.5 Glazing and Wet Surfaces

Change Type: Modification
- The exception from the safety glazing requirements for glazing that is 60 inches or greater from the water’s edge of a bathtub, hot tub, spa, whirlpool, or swimming pool has been expanded to include glazing that is an equivalent distance from the edge of a shower, sauna, or steam room.

R308.4.7 Glazing Adjacent to the Bottom Stair Landing

Change Type: Clarification
- Glazing adjacent to the bottom stair landing is now defined as the area in front of the plane of the bottom tread.

R310 Emergency Escape and Rescue Openings

Change Type: Clarification
- The emergency escape and rescue openings provisions have been reorganized.
- Separate provisions spell out the requirements for windows and doors used for emergency escape and rescue.

R310.5, R310.6 Emergency Escape and Rescue Openings for Additions, Alterations and Repairs

Change Type: Clarification
- The basement of a dwelling addition does not require an opening if there is access to a basement that does have an opening.
- Remodeling of an existing basement does not trigger the opening requirements unless a new bedroom is created.
R311.1 Means of Egress

**Change Type:** Clarification
- The required egress door of a dwelling unit must open directly into a public way or to a yard or court that opens to a public way.

R311.7.3, R311.7.5.1 Stair Risers

**Change Type:** Modification
- The total vertical rise in a stairway without an intermediate landing has increased from 144 inches to 147 inches.
- Open risers have been clarified. They are based on the distance above grade or the floor below.
- A new exception clarifies that open risers are permitted on spiral stairways.

R311.7.10.1 Spiral Stairways

**Change Type:** Modification
- The code adds a definition of spiral stairway that omits any requirement for a center post to allow for design flexibility.
- The code now limits the size of spiral stairways by restricting the radius at the walkline to a dimension not greater than 24½ inches.
- The method of measurement for tread depth now matches the winder provisions.

R311.7.11, R311.7.12 Alternating Tread Devices and Ship Ladders

**Change Type:** Addition
- Alternating tread devices and ship ladders have been added to the stair provisions. Neither device is approved for use as a means of egress.

**Alternating tread device.**
- A device that has a series of steps between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, usually attached to a center support rail in an alternating manner so that the user does not have both feet on the same level at the same time.
R311.8 Ramps

Change Type: Modification

- Ramps that do not serve the required egress door are now permitted to have a slope not greater than 1 unit vertical in 8 units horizontal.

R312.1.2 Guard Height

Change Type: Modification

- The provision requiring that the guard height be measured from the surface of adjacent fixed seating has been removed from the code.

R312.2.1 Window Fall Protection

Change Type: Clarification

- The window fall prevention provisions have been revised to clarify the meaning, remove redundant language, and achieve consistency with the IBC provisions.

R314 Smoke Alarms

- Change Type: Modification
  - Battery-operated smoke alarms are permitted for satisfying the smoke alarm power requirements when alterations, repairs, and additions occur.
  - Household fire alarm systems no longer require monitoring by an approved supervising station.
  - New provisions address smoke alarms installed near bathrooms and cooking appliances.
R315 Carbon Monoxide Alarms

Change Type: Modification

- Carbon monoxide alarms now require connection to the house wiring system with battery backup.
- Exterior work such as roofing, siding, windows, doors, and deck and porch additions no longer trigger the carbon monoxide alarm provisions for existing buildings.

R322.1, R322.2 Flood Hazards

Change Type: Modification

- Section R322.1 is modified to emphasize that the provision applies to existing buildings in flood hazard areas where 50 percent or more of the structure has damage and requires restoration.
- Section R322.2 limits the minimum elevation allowed for dwellings in flood hazard areas.

R315 Carbon Monoxide Alarms

Change Type: Modification

- An attached garage requires carbon monoxide alarms, if the garage has an opening into the dwelling.
- A carbon monoxide alarm is required in bedrooms when there is a fuel-fired appliance in the bedroom or adjoining bathroom.
- Carbon monoxide detection systems only require detectors installed in the locations prescribed by the code and not those locations described in NFPA 720.

R322.3 Coastal High-Hazard Areas

Change Type: Modification

- Coastal A Zones are defined and an exception for foundation types in Coastal A Zones is added.
- Coastal A Zones = flood hazard areas that have been delineated as subject to wave heights between 1.5 feet and 3 feet.
R325 Mezzanines

Change Type: Addition

- New provisions in Section R325 place limitations on the construction of mezzanines related to ceiling height and openness consistent with the *International Building Code* (IBC).
  - The clear height above and below mezzanine floor construction shall be not less than 7 feet (2134 mm).

Code Changes

- Of the changes covered thus far, which will have the most impact on your job?
**R403.1.1 Minimum Footing Size**

**Change Type:** Modification

**2012 IRC Table R403.1, footing assumptions:**
- Snow load of 50 psf
- 20 ft of tributary roof area
- 16 ft of tributary floor area
- 10-ft first-floor height
- 8-ft second-floor height
- 8-ft third floor height
- 9-ft second floor height
- 10-ft first floor height
- 3-ft crawlspace wall height
- 10-ft basement wall height,
- 10-inch basement wall thickness,
- Concrete weight of 125 pcf

**2015 IRC Tables R403.1, footing assumptions:**
- Snow load of 20, 30, 50 or 70 psf
- 18 ft of tributary roof area
- 16 ft of tributary floor area
- 10-ft first-floor height
- 8-ft second-floor height
- 9-ft second floor height
- 10-ft first floor height
- 3-ft crawlspace wall height
- 10-ft basement wall height,
- 10-inch basement wall thickness,
- Concrete weight of 125 pcf

**Minimum Required Footing**

*Two-story house with slab on grade foundation:*
- Light-frame construction
- Soil-bearing strength = 1500 psf
- Roof Live Load = 20 psf
- 32 ft wide building with interior load-bearing wall

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*Symbols and abbreviations:*
- **Load-Bearing Value of Soil (psf)**
- **Footings with Light Frame**
- **Soil-Bearing Strength**
- **Roof Live Load**
- **Soil Weight**
- **Concrete Weight**
- **Floor Area**
R403.1.2, R602.10.9.1 Continuous Footings in Seismic Design Categories D₀, D₁, and D₂

**Change Type:** Clarification

- Clarifies the continuous footing requirement in Section R403.1.2 and moves requirements in Section R602.10.9.1 to the foundation chapter.

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R403.1.3 Footing and Stem Wall Reinforcing in Seismic Design Categories D₀, D₁, and D₂

**Change Type:** Clarification

- Updated figures and code provisions in Section R403.1.3 now clearly define minimum required reinforcement in footings and stem walls located in Seismic Design Categories (SDC) D₀, D₁, and D₂.

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R403.1.6 Foundation Anchorage

**Change Type:** Modification

- Anchor bolts are now required to be placed in the middle third of the sill plate. Approved anchors may be used instead of ½-inch anchor bolts.
**R403.1.6 Foundation Anchorage**

- **Change Type:** Modification
- Minimum vertical reinforcement in masonry stem walls has been increased from No. 3 bars to No. 4 bars spaced a maximum of 4 feet on center in grouted cells.

**R404.1.4.1 Masonry Foundation Walls in SDC D₀, D₁, and D₂**

- **Change Type:** Modification
- Retaining walls - freestanding walls not supported at the top - with more than 48 inches of unbalanced backfill must be designed by an engineer.
- Retaining walls resisting additional lateral loads with > 24 in. of unbalanced backfill must be designed by an engineer.
### Tables R502.3.1(1), R502.3.1(2) Floor Joist Spans for Common Lumber Species

**Change Type:** Modification

<table>
<thead>
<tr>
<th>Species and Grade</th>
<th>Dead Load = 10 psf</th>
<th>Dead Load = 24 psf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 x 8</td>
<td>2 x 8</td>
</tr>
<tr>
<td>Southern Pine #2</td>
<td>12-7</td>
<td>15-3</td>
</tr>
<tr>
<td>Southern pine #1</td>
<td>13-8</td>
<td>15-3</td>
</tr>
</tbody>
</table>

**Floor Spans**

- **Bedroom**
  - Dead load = 10 psf
  - 2x10 joists
  - 16" o.c. spacing
  - Southern Pine (SP) #2

  The SP #2 span length is significantly reduced from the 2012 IRC span length.

  **Note:** An SP #1 joist will span about the same length in the 2015 IRC Table R502.3.1(1) or R502.3.1(2) as the SP #2 did in the tables in the 2012 IRC.

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### R502.10 Framing of Floor Openings

**Change Type:** Modification

- Requirements for header joist and trimmer connections in the framing of floor openings have been deleted.

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### R507.1, R507.4 Decking

**Change Type:** Modification

- The code sets the maximum allowable spacing for deck joists supporting the various types of common decking materials.

<table>
<thead>
<tr>
<th>Material Type and Nominal Size</th>
<th>Maximum on-Center Joist Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perpendicular to Joist</td>
<td>Diagonal to Joist</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>1-1/4-inch thick wood</td>
<td>16 inches</td>
</tr>
<tr>
<td>2-inch thick wood</td>
<td>24 inches</td>
</tr>
</tbody>
</table>

*For 30°: 1 inch = 24.4 mm, 1 foot = 304.8 mm, 1 degree = 0.01745 rad.

For 30°: Maximum angle of 45 degrees from perpendicular for wood deck boards.
R507.2 Deck Ledger Connection to Band Joist

Change Type: Clarification

- The deck ledger section is reorganized to better describe the minimum requirements for connection of deck ledgers to band joists.

R507.2.4 Deck Lateral Load Connection

Change Type: Modification

- The prescriptive deck lateral load connection requires the hold-down devices to be within 2 ft of the ends of the deck.
- A new lateral load connection option prescribes four hold-downs installed below the deck structure.

R507.2.4 Alternative Deck Lateral Load Connection

Change Type: Addition

New sections and tables provide prescriptive methods for joists and beams in deck construction.

- Section R507.5 describes requirements for deck joists.
- Section R507.6 lists requirements for deck beams, and
- Section R507.7 describes minimum bearing requirements for joists and beams.
TABLE R507.5. Deck Joint Spans for Common Lumber Species (in.)

<table>
<thead>
<tr>
<th>Species</th>
<th>Size</th>
<th>Spacing of Deck Joists With No. 6 Galvanized Nails (inches)</th>
<th>Spacing of Deck Joists With No. 8 Galvanized Nails (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Pine</td>
<td>2.5</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2.25</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Douglas Fir-Larch, Hemlock, Spruce, Pine-Fir, Redwood, Western Cedar, Ponderosa Pine, Red Pine, White Pine</td>
<td>2.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>1.75</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Redwood, Western Cedar, Ponderosa Pine, Red Pine</td>
<td>1.5</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>1.25</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

TABLE R507.8. Deck Post Height (m)

<table>
<thead>
<tr>
<th>Post Size</th>
<th>Maximum Height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 4</td>
<td>0.7</td>
</tr>
<tr>
<td>4 x 6</td>
<td>1.1</td>
</tr>
<tr>
<td>6 x 6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Change Type: Addition

- Establishes minimum sizes of wood posts supporting wood decks and describes the requirements for connection of deck posts to the footing.
Chapter 6
Wall Construction

Table R602.3(1) Fastening Schedule—Roof Requirements

Change Type: Modification

<table>
<thead>
<tr>
<th>Description of Building Elements</th>
<th>Number and Type of Fastener*</th>
<th>Spacing and Location of Fasteners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Blocking between ceiling joists or rafters to top plate</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail</td>
</tr>
<tr>
<td>2 Ceiling joists to top plate</td>
<td>Per Table R602.3.1(1M)</td>
<td>Face nail</td>
</tr>
<tr>
<td>3 Ceiling joist not attached to parallel rafter, laps over partitions</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail</td>
</tr>
<tr>
<td>4 Ceiling not attached to parallel rafter</td>
<td>Per Table R602.3.1(1M)</td>
<td>Face nail</td>
</tr>
<tr>
<td>5 Collar tie to rafter, face nail or 26 gauge ridge strap to rafter</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail such as</td>
</tr>
</tbody>
</table>

Table R602.3(1) Fastening Schedule—Wall Requirements

Change Type: Modification

<table>
<thead>
<tr>
<th>Description of Building Elements</th>
<th>Number and Type of Fastener*</th>
<th>Spacing of Fasteners and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Stud to stud (not at braced wall panel)</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>24” o.c., face nail</td>
</tr>
<tr>
<td>9 Stud to stud, blocking stud at intersecting wall corners (not braced wall panels)</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>12” o.c., face nail</td>
</tr>
<tr>
<td>10 Stud-up header, two-pieces with 2” to 2” header with 1/2” space</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>10” o.c., each edge, face nail</td>
</tr>
<tr>
<td>11 Continuous header to stud, ice nail</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>12” o.c., each edge, face nail</td>
</tr>
<tr>
<td>12 Top plate to top plate, double-top plates, face nail</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>12” o.c., face nail</td>
</tr>
</tbody>
</table>

Table R602.3(1) Fastening Schedule—Floor Requirements

Change Type: Modification

<table>
<thead>
<tr>
<th>Description of Building Elements</th>
<th>Number and Type of Fastener*</th>
<th>Spacing of Fasteners and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 Joint to sill, top plate or girders</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail</td>
</tr>
<tr>
<td>22 Rim joint, head joint, blocking to sill or top plate (roof applications)</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail</td>
</tr>
<tr>
<td>23 1” x 6” subfloor or less to each joint</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Face nail</td>
</tr>
<tr>
<td>24 3” subfloor or joist or girders—blind and face nail</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>Blind and face nail</td>
</tr>
<tr>
<td>25 2” planks (plank &amp; beam—floor &amp; roof)</td>
<td>3-20d 4dHDR (3/4” x 0.131”), or 3-20d common 3-29d</td>
<td>At all bearings, face nail</td>
</tr>
</tbody>
</table>

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R602.3.1 Stud Size, Height, and Spacing

Change Type: Modification
- Table R602.3.1 is deleted
- The exception for walls greater than 10 feet tall is added to the text of Section R602.3.1.
- If studs in a tall wall meet Exception 2, they meet the requirements of the IRC and do not need engineering or use of an alternate standard.

Prescriptive Tall Walls

2 x 6 Continuous Studs Used in an 18-Foot Gable Wall
- The gable end wall studs do not support a roof load. They form a non-load-bearing wall.
- From Table R602.3(5), non-bearing walls may have studs up to 20 feet tall when using 2 x 6 lumber.

R602.7 Headers

Change TYPE: Modification
- The girder and header span tables of Chapter 5 have been moved into Chapter 6, to the header section.
- Multi-ply and single header tables are combined.

R602.7 Headers

Change Type: Addition
- A new table for girder spans for open porches is added.
R602.7 Headers
Change Type: Addition
- A new section describing rim board headers is added.
- A new section and table listing the minimum number of full height studs is added.

### Table R602.7.5 Minimum Number of Full Height Studs at Each End of Headers in Exterior Walls

<table>
<thead>
<tr>
<th>Header Span (feet)</th>
<th>Maximum Stud Spacing (in. per Table R602.7.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td>≤ 3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

Table R602.10.5 Contributing Length of Method CS-PF Braced Wall Panels

Change Type: Modification

<table>
<thead>
<tr>
<th>Method (See Table R602.10.4)</th>
<th>Minimum Length (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS-PF</td>
<td></td>
</tr>
<tr>
<td>SDC A, B, and C</td>
<td>16</td>
</tr>
<tr>
<td>SDC D, D1, and D2</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>1.5 x Actual</td>
</tr>
<tr>
<td></td>
<td>Actual</td>
</tr>
</tbody>
</table>

R602.10.3(1) Bracing Requirements Based on Wind Speed

Change Type: Modification

<table>
<thead>
<tr>
<th>Ultimate Design Wind Speed (mi/h)</th>
<th>Minimum Total Length (in.) of Braced Wall Panels Required Along Each Braced Wall Face1</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>3500</td>
</tr>
<tr>
<td>120</td>
<td>3000</td>
</tr>
<tr>
<td>150</td>
<td>2500</td>
</tr>
<tr>
<td>180</td>
<td>2000</td>
</tr>
</tbody>
</table>

R602.10.6.2 Method PFH: Portal Frame with Hold-Downs

Change Type: Modification
- Due to recent testing of Method PFH (Portal Frame with Hold-downs), the minimum required capacity of the holddowns is lowered to 3500 lbs in the 2015 IRC.
- The testing confirms that two sill plates are sufficient under each braced wall panel of the portal rather than the three plates required previously.
**R602.10.11 Cripple Wall Bracing**

**Change Type:** Modification

- A reduction in braced wall panel spacing is no longer required in a cripple wall line.
- References to the bracing length adjustment tables clarify that increased bracing is required if gypsum wall finish is not applied to the cripple walls.

---

**R602.12 Simplified Wall Bracing**

**Change Type:** Modification

Limits for Simplified Wall Bracing have been expanded:

- Up to 3 stories
- Wind speeds up to 130 mph
- Wind Exposure Category C
R603.9.5 Structural Sheathing over Steel Framing for Stone and Masonry Veneer

Change Type: Modification

R606 Masonry Walls

Change Type: Reorganization

- Sections R606, R607, R608, and R609 have been organized into one section providing requirements for masonry construction of single- and two-family dwellings and townhouses.

R606.3.5 Grouting Requirements for Masonry Construction

Change Type: Modification

- Grouting above-ground masonry walls now combines requirements for single, multi-wythe, and reinforced masonry construction in one section.
- Clarified provisions address grout placement, cleanouts, and construction for all three types of masonry construction.

R610.7 Drilling and Notching in Structural Insulated Panels

Change Type: Modification

- Drilling and notching provisions for structural insulated panels (SIP) are clarified.
- Horizontal chases, used for switch-box wiring, need to be placed 48 in. above the bottom edge of the SIP.
**Code Changes**

Of the changes covered thus far, which will have the most impact on your job?

---

**R703.3 Siding Material Thickness and Attachment**

**Change Type:** Modification

- Table R703.4, Weather Resistant Siding Attachment and Minimum Thickness, is simplified.
- New code language is added to Section R703 to clarify limitations of use of the table and to describe fastener type, length, and penetration.

---

**Chapter 7**

*Wall Covering*

---

**Table R703.3.1**

<table>
<thead>
<tr>
<th>Minimum Wind Load, lb per square foot</th>
<th>Exposure</th>
<th>Panel Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>65 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>120 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>150 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>180 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>240 lb</td>
<td>E</td>
<td>0</td>
</tr>
<tr>
<td>300 lb</td>
<td>E</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table R703.3.2**

<table>
<thead>
<tr>
<th>Application</th>
<th>Number and type of Fastener</th>
<th>Spacing of Fasteners (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior wall covering (weighting 3 gal or less attached to wood structural panel sheathing)</td>
<td>Ring shank nail</td>
<td>3&quot; (min)</td>
</tr>
<tr>
<td>Interior wall covering (weighting 3 gal or less attached to wood structural panel sheathing)</td>
<td>Ring shank nail</td>
<td>3&quot; (min)</td>
</tr>
<tr>
<td>Note: Does not apply to vertical siding.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

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R703.5 Wood, Hardboard, and Wood Structural Panel Siding

**Change Type:** Modification

- New subsections describe the specific requirements for stud spacing and minimum siding lap relevant to horizontal wood siding, vertical wood siding, and panel siding products.

R703.6 Wood Shakes and Shingles on Exterior Walls

**Change Type:** Modification

- The provisions for the application of wood shakes and shingles on exterior walls have been reorganized to give more information within tables for ease of use.

R703.9 Exterior Insulation and Finish Systems (EIFS)

**Change Type:** Modification

- Limitations for exterior insulation and finish systems with and without drainage have been added to the 2015 IRC.

R703.11.1 Vinyl Siding Attachment

**CHANGE TYPE:** Addition

- This code change clarifies nailing penetration and spacing requirements for horizontal and vertical vinyl siding.
**R703.13, R703.14 Insulated Vinyl Siding and Polypropylene Siding**

**Change Type:** Addition

- **Insulated Vinyl Siding.** A vinyl cladding product with manufacturer-installed foam plastic insulating material as an integral part of the cladding product, having a minimum thermal resistance of not less than R-2.
- **Polypropylene Siding.** A shaped material, made principally from polypropylene homopolymer, or copolymer, that in some cases contains fillers or reinforcements, that is used to clad exterior walls or buildings.
- New sections set minimum requirements for insulated vinyl siding and polypropylene siding.
- Siding must meet ASTM D 7793 and ASTM D 7254 respectively.

**R703.15, R703.16, R703.17 Cladding Attachment over Foam Sheathing**

**Change Type:** Addition

- Three new sections set minimum requirements for:
  - Cladding attachment over foam sheathing to wood framing (R703.15)
  - Cold-formed steel framing (R703.16)
  - Masonry or concrete walls (R703.17)
- For light-frame construction, prescriptive requirements are given
- Concrete and masonry construction continues to require engineered design

**Tables R802.4, R802.5 Ceiling Joist and Rafter Tables**

**Change Type:** Modification
Ceiling Joint Spans

Uninhabitable attic with limited storage

- LL = 20 psf
- DL = 10 psf
- 2x10 joists
- 16" o.c. spacing
- SP #2

The SP #2 span length is significantly reduced from the 2012 IRC span length.

Note: An SP #1 joist will span about the same length in the 2015 IRC Table R802.4(1) or R802.4(2) as the SP #2 did in the tables in the 2012 IRC.

---

Table R806.5 Insulation for Condensation Control in Unvented Attics

Change Type: Modification

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>Minimum Rigid Board on Air-Impermeable Insulation R-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B and 3B tile roof only</td>
<td>0 (none required)</td>
</tr>
<tr>
<td>1, 2A, 2B, 3A, 3B, 3C</td>
<td>R-6</td>
</tr>
<tr>
<td>4C</td>
<td>R-10</td>
</tr>
<tr>
<td>4A, 4B</td>
<td>R-15</td>
</tr>
<tr>
<td>5</td>
<td>R-20</td>
</tr>
<tr>
<td>6</td>
<td>R-25</td>
</tr>
<tr>
<td>7</td>
<td>R-30</td>
</tr>
<tr>
<td>8</td>
<td>R-35</td>
</tr>
</tbody>
</table>

---

R806.1 Attic Ventilation

Change Type: Deletion

- The 2012 IRC exception allowing the building official to waive ventilation requirements due to atmospheric or climatic conditions has been deleted.
**R905.1.1 Underlayment**

**Change Type:** Modification

**Table R905.1.1.1 Underlayment**

<table>
<thead>
<tr>
<th>Roof Covering</th>
<th>Section</th>
<th>Maximum Ultimate Design Wind Speed, $V_{u}=140$ mph</th>
<th>Maximum Ultimate Design Wind Speed, $V_{u}=200$ mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt shingles</td>
<td>R905.1</td>
<td>ASTM D 605 Type II, ASTM D 6499 Type I, III, II, or IV</td>
<td>ASTM D 6499 Type I, II, III, or IV</td>
</tr>
<tr>
<td>Clay and concrete tile</td>
<td>R905.3</td>
<td>ASTM D 1858 Type II, ASTM D 1858 Type I</td>
<td>ASTM D 1858 Type I</td>
</tr>
<tr>
<td>Metal roof shingles</td>
<td>R905.4</td>
<td>ASTM D 356 Type I or II, ASTM D 4869 Type II, III or IV</td>
<td>ASTM D 4869 Type I</td>
</tr>
<tr>
<td>Metal and steel-type shingles</td>
<td>R905.5</td>
<td>ASTM D 236 Type I, II, III, or IV</td>
<td>ASTM D 236 Type I, II, III, or IV</td>
</tr>
</tbody>
</table>

**R905.7.5 Wood Shingle Application**

**Change Type:** Modification

- Minimum requirements for application of wood shingles are expanded
- Fastener type is clarified
- New table lists minimum sizes for box nails
- Labeling requirements for fastener packaging have also been added

**Table R905.7.5.1 Wood Shingle Application**

<table>
<thead>
<tr>
<th>Shingle Type</th>
<th>Nail Type and Minimum Length</th>
<th>Minimum Shank Diameter</th>
<th>Minimum Shank Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4 x 13 1/4</td>
<td>6d Box, 1-7/8&quot;</td>
<td>0.13&quot;</td>
<td>0.13&quot;</td>
</tr>
<tr>
<td>1 x 13 1/2</td>
<td>8d Box, 2 5/8&quot;</td>
<td>0.13&quot;</td>
<td>0.13&quot;</td>
</tr>
<tr>
<td>1 1/2 x 13 1/2</td>
<td>10d Box, 3 1/8&quot;</td>
<td>0.13&quot;</td>
<td>0.13&quot;</td>
</tr>
</tbody>
</table>

**Note:** The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at the side laps.
R905.8.6 Wood Shake Application

Change Type: Modification

- Minimum requirements for application of wood shakes are expanded
- Fastener type is clarified
- New table lists minimum sizes for box nails
- Labeling requirements for fastener packaging have also been added

---

R907 Rooftop-Mounted Photovoltaic Systems

Change Type: Addition

- Requirements and limits for rooftop-mounted photovoltaic systems are added
- Complement requirements in Section R324
- References NFPA 70
- Panels and modules must meet UL 1703

---

R905.16 Photovoltaic Shingles

Change Type: Modification

- Contains requirements for roof decks, minimum roof deck slope, underlayment, underlayment application, ice barrier, and underlayment for high-wind areas.

---

Code Changes

Of the changes covered thus far, which will have the most impact on your job?
N1101.13 Compliance Paths

Change Type: Modification
- The mandatory provisions combined with either the prescriptive provisions or the performance provisions are deemed to comply with the code.

1. Sections N1101.14 through N1104.
2. Section N1105 and the provisions of Sections N1101.14 through N1104 labeled “Mandatory.”
3. An energy rating index (ERI) approach in Section N1106.

N1101.14 Permanent Energy Certificate

Change Type: Modification
- A permanent energy certificate is to be placed on an interior wall in proximity to the furnace, in a utility room, or in another approved location inside the building.

N1102.1.3 R-Value Computation—Insulated Siding

Change Type: Modification
- Insulated siding may be used in the calculation for satisfying the wall insulation R-value.
- The labeled R-value for the siding must be reduced by R-0.6 for calculation purposes.
N1102.2.4 Access Hatches and Doors

Change Type: Clarification

- Vertical doors that access unconditioned attics and crawl spaces do not require an R-value to match the required wall insulation. Such doors must comply with the fenestration U-factor requirements of Table N1102.1.2.

N1102.2.7, Table N1102.1.2 R-Value Reduction for Walls with Partial Structural Sheathing

Change Type: Clarification

- The allowed R-value reduction for portions of walls with structural sheathing and requiring continuous insulation has been moved from footnote h of Table N1102.1.2 and placed in a new section to clarify the application.

N1102.2.8, Table N1102.4.1.1 Floor Framing Cavity Insulation

Change Type: Modification

- An air space may exist above required insulation installed in a floor framing cavity above unconditioned space.
- Table N1102.4.1.1 has been reformatted into three columns to separate the air barrier requirements from the insulation requirements.

| Table N1102.4.1.1 Insulation at Wall Corners and Headers

Change Type: Clarification

- Insulation requirements at framed wall corners and headers only apply when there is space to install insulation.
- Minimum insulation thermal resistance is R-3 per inch of insulation.

<table>
<thead>
<tr>
<th>Table N1102.4.1.1 Insulation at Wall Corners and Headers</th>
<th>Insulation Installation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>Insulation Installation Criteria</td>
</tr>
<tr>
<td>Walls</td>
<td>Cavity within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum.</td>
</tr>
</tbody>
</table>
### N1102.4.2, Table N1102.4.1.1

**Wood-Burning Fireplace Doors**

**Change Type:** Modification

- Doors on wood-burning fireplaces must be listed for the application. The requirement for gasketed doors on fireplaces has been removed.

**TABLE N1102.4.1.1 (R402.4.1.1)**

<table>
<thead>
<tr>
<th>Component</th>
<th>Air Barrier Criteria</th>
<th>Insulation Installation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fireplace</td>
<td>An air-barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors.</td>
<td></td>
</tr>
</tbody>
</table>

*Portions of table not shown for brevity and clarity.*

### N1103.3 Duct Sealing and Testing

**Change Type:** Modification

- The duct sealing and testing provisions have been reorganized to clarify the application.
- The maximum duct leakage rates are now prescriptive rather than mandatory provisions to accommodate design flexibility.

### N1103.5 Heated Water Circulation and Temperature Maintenance Systems

**Change Type:** Modification

- Automatic controls are required to maintain hot water temperature for heated water circulation systems and for heat trace temperature maintenance systems.
- Continuously operating circulation pumps are no longer permitted.
- Heat trace systems must comply with one of the referenced standards.

### Code Changes

Of the changes in the energy section, which will have the most impact on your job?
**M1502.4.4, M1502.4.5 Dryer Exhaust Duct Power Ventilators**

**Change Type:** Addition

- The code now recognizes the use of dryer exhaust duct power ventilators (DEDPVs) to increase the allowable exhaust duct length for clothes dryers.

**M1502.4.6 Dryer Duct Length Identification**

**Change Type:** Modification

- A permanent label identifying the concealed length of the dryer exhaust duct is no longer required where the equivalent duct length does not exceed 35 feet.
- For the dryer exhaust duct exceeding 35 feet, a label or tag is required whether the duct is concealed or not.
M1503.4 Makeup Air for Range Hoods

Change Type: Modification

- Automatic operation of a mechanical damper is no longer required for kitchen exhaust systems exceeding a rating of 400 cubic feet per minute.
- Transfer openings are permitted to obtain makeup air from rooms other than the kitchen.

M1506.2 Exhaust Duct Length

Change Type: Addition

- Maximum exhaust duct lengths are based on duct diameter, type of duct and the exhaust fan airflow rating.

M1601.1.1, Table M1601.1.1, M1601.2

Above-Ground Duct Systems

Change Type: Modification

- Duct system requirements reference applicable standards.
- The table for material thickness of metal ducts is updated to be consistent with the SMACNA sheet metal construction standard.
**M1601.4 Duct Installation**

**Change Type:** Modification

- Tapes and mastics used to seal sheet metal ducts must be listed to UL 181 B similar to sealing of flexible ducts.
- Snap-lock and button-lock seams are no longer exempt from the sealing requirements.

**M1602 Return Air**

**Change Type:** Modification

- Provisions for return air have been simplified and clarified.
- The intent to keep contaminants out of the airstream of the heating, ventilation and air-conditioning (HVAC) system is unchanged.

**G2404.11 Condensate Pumps**

**Change Type:** Addition

- Condensate pumps located in uninhabitable spaces must be connected to the appliance to shut down the equipment in the event of pump failure.
G2411.1.1 Electrical Bonding of Corrugated Stainless Steel Tubing

Change Type: Modification
- The maximum allowable length of the bonding jumper for corrugated stainless steel tubing (CSST) is 75 feet.

G2413.2 Maximum Gas Demand

Change Type: Modification
- Table G2413.2 was deleted to clarify that the code requires the actual maximum input rating of the appliances to be known and used for gas pipe sizing purposes.

G2414.6 Plastic Pipe, Tubing and Fittings

Change Type: Modification
- PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.

G2415.5 Fittings in Concealed Locations

Change Type: Clarification
- Reorganized section.
- Threaded elbows, tees and couplings are now specifically approved for concealed locations as the code always intended.

1. Threaded elbows, tees and tapered couplings
2. Brazed fittings
3. Welded fittings
4. Fittings listed to ANSI LC-1/CSA 6.26 or ANSI LC-4.
**G2415.7 Protection of Concealed Piping Against Physical Damage**

**Change Type:** Modification

- Protection of piping now addresses piping parallel to framing members and piping within framing members.
- The new text requires that protection extend well beyond the edge of members that are bored or notched.

**G2422.1 Connecting Portable and Movable Appliances**

**Change Type:** Modification

- Portable gas appliances used outdoors require gas hoses designed for the purpose.
- Such hoses must comply with ANSI Z21.54.

**G2421.2 Medium-Pressure Regulators**

**Change Type:** Modification

- Medium-Pressure (MP) line regulators installed in rigid piping must have a union installed to allow removal of the regulator.

**G2426.7.1 Door Clearance to Vent Terminals**

**Change Type:** Addition

- An appliance vent terminal is not permitted in a location within 12 inches of the arc of a swinging door.
### G2427.4.1, G2427.6.8.3 Plastic Piping for Appliance Vents

**Change Type:** Modification

- Plastic pipe for venting appliances must be:
  - Listed for the specific appliance
  - Appliance manufacturer identifies the type of piping and size allowed

### G2439.4, G2439.7 Clothes Dryer Exhaust Ducts

**Change Type:** Modification

- New text recognizes the use of dryer exhaust duct power ventilators (DEDPVs) to increase the allowable exhaust duct length for clothes dryers.
- For dryer exhaust duct exceeding 35 feet, a label or tag is required whether the duct is concealed or not.
- Instead of prohibiting all duct fasteners such as screws and rivets, the code now limits the penetration of fasteners, where installed.

### G2427.8 Venting System Termination Location

**Change Type:** Modification

- Sidewall vent terminal location with respect to adjoining buildings is limited.
- A 10-foot separation is required when a vent discharges in the direction of an opening in an adjacent building.

### G2447.2 Prohibited Location of Commercial Cooking Appliances

**Change Type:** Modification

- Cooking appliances that are listed as both commercial and domestic appliances may be installed in residential construction.
Code Changes

Of the changes in the mechanical and fuel gas sections, which will have the most impact on your job?

Chapter 25

Plumbing Administration

P2502.1, P2503.4 Inspection and Tests for Building Sewers

- **Change Type:** Clarification
  - New text clarifies the method for examining existing building sewers and building drains when the entire sanitary drainage system is replaced. Internal examination is required to verify the size, slope, and condition of the existing piping. A new provision prescribes a pressure test for a forced sewer at a test pressure of 5 psi (34.5 kPa) greater than the pump rating.
P2503.5 Drain, Waste, and Vent Systems Testing

**Change Type:** Modification

- The head pressure for a water test on drain, waste, and vent (DWV) systems has been reduced from 10 feet to 5 feet.

P2603.2.1 Protection Against Physical Damage

**Change Type:** Modification

- For piping installed through bored holes or in notches, the minimum clearance distance from the concealed piping to the edge of the framing member has been reduced from 1½ inches to 1¼ inches. Protection is required for piping installed less than 1¼ inches from the edge of the framing member.

P2603.3 Protection Against Corrosion

**Change Type:** Modification

- The minimum thickness of sheathing material for protection of piping against corrosion has been reduced from 0.025 inches to 0.008 inches (8 mil). The corrosion protection requirement applies to metallic piping other than cast iron, ductile iron, and galvanized steel that is in direct contact with concrete, masonry or steel framing. Previously, protection was only required for materials passing through walls and floors of these materials. All metallic piping requires corrosion protection when located in corrosive soils.
**Table P2605.1**

**Piping Support**

- **Change Type:** Modification
  - Support spacing requirements for PEX and PE-RT tubing 1¼ inches and greater in diameter have been added to the table. Footnote b of Table P2605.1 clarifies the mid-story guide requirements for some types of vertical pipe 2 inches and smaller in diameter.

<table>
<thead>
<tr>
<th>TABLE P2605.1</th>
<th>Piping Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spacing Required</td>
</tr>
<tr>
<td></td>
<td>Spacing Required</td>
</tr>
<tr>
<td></td>
<td>Spacing Required</td>
</tr>
</tbody>
</table>

**P2502.1, P2503.4 Inspection and Tests for Building Sewers**

**CHANGE TYPE:** Clarification

- Internal examination is required to verify the size, slope, and condition of the existing piping.
- A pressure test is required for a forced sewer at a test pressure of 5 psi greater than the pump rating.

**P2503.5 Drain, Waste, and Vent Systems Testing**

**CHANGE TYPE:** Modification

- Head pressure for a water test on drain, waste, and vent (DWV) systems has been reduced from 10 feet to 5 feet.
**P2702.1, P2706.1 Waste Receptors**

**Change Type:** Modification

- Waste receptors are now permitted in bathrooms and closets.

**WASTE RECEPTOR.** A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.

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**P2801 Water Heater Drain Valves and Pans**

**Change Type:** Modification

- Drain valves with a threaded outlet are required for water heaters.
- Aluminum and plastic water heater pans are acceptable.
- A pan drain is not required when a water heater is replaced and there is no existing drain.

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**P2804.6.1 Water Heater Relief Valve Discharge Piping**

**Change Type:** Modification

- The temperature and pressure (T&P) relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply of the building.
- PEX and PE-RT tubing used for relief valve discharge piping must be one size larger than the T&P valve discharge outlet and the outlet end of the tubing must be fastened in place.
Chapter 29

Water Supply and Distribution

P2901 Nonpotable Water Systems

Change Type: Modification

- Nonpotable water outlets that utilize nonpotable water must be identified with a warning and a symbol that nonpotable water is being used.
- The color purple is established for identifying distribution piping conveying nonpotable water.

P2910 through P2913 Nonpotable Water Systems

Change Type: Modification

- New Sections P2910 through P2913 are extracted from the International Green Construction Code (IgCC).
- Provide guidance on the collection, storage, and distribution of various types of nonpotable water for residential buildings.

P2906.2 Lead Content of Drinking Water Pipe and Fittings

Change Type: Modification

- The limitation for lead content in pipe, pipe fittings, joints, valves, faucets, and fixture fittings that convey water used for drinking and cooking has become more stringent.
- Average lead content of 0.25 percent lead.
Chapter 30
Sanitary Drainage

**P3003.9 Solvent Cementing of PVC Joints**

Change Type: Modification

- For 4-inch pipe size and smaller it is not required to apply primer prior to solvent cementing for drain, waste, and vent PVC pipe and fittings for non-pressure applications.

**P3005.2 Cleanouts**

Change Type: Modification

- Brass cleanout plugs are only permitted for metallic piping.
- Where located at a finished wall, the cleanout must be within 1½ inches of the finished surface.
- A cleanout is no longer required at the base of each waste or soil stack.

**P3008.1 Backwater Valves**

Change Type: Modification

- For existing buildings, fixtures that are located above the next upstream manhole cover are allowed to discharge through a backwater valve.
**P3103.1, P3103.2 Vent Terminals**

**Change Type:** Modification

- Where a min. 3-in. vent terminal is required to prevent frost blockage in cold climates, the pipe must extend at least 12 inches inside the building’s thermal envelope.
- The min. 7-ft height requirement for vent terminations applies only for roofs used for decks, patios and balconies.

**P3201.2 Trap Seal Protection Against Evaporation**

**Change Type:** Modification

- Trap seal protection against evaporation may use trap seal primer valves supplied with nonpotable water and barrier-type trap seal protection devices.
Code Changes

Of the changes covered in plumbing, which will have the most impact on your job?

Chapter 39
Power and Lighting Distribution

E3901.9 Receptacle Outlets for Garages

Change Type: Modification
- Garage receptacle outlets must be served by a separate branch circuit that does not supply outlets outside the garage.
- At least one receptacle outlet is required for each car space in a garage.
E3902.8, E3902.9, E3902.10 Ground-Fault Circuit Interrupter Protection

Change Type: Modification

- Laundry areas require ground-fault circuit interrupter (GFCI) protection.
- Receptacles within 6 feet of bathtubs and showers, and receptacles for dishwashers also require GFCI protection.

E4203.4.3 Location of Low-Voltage Luminaires Adjacent to Swimming Pools

Change Type: Modification

- Listed low-voltage luminaires are permitted to be located less than 5 feet from the water’s edge of spas, swimming pools, and hot tubs.

E4204.2 Bonding of Outdoor Hot Tubs and Spas

Change Type: Modification

- Perimeter equipotential bonding is not required when a spa or hot tub is:
  - Self-contained
  - Not suitable for indoor use
  - Above grade
  - Greater than 28 in. above perimeter surfaces
- Or when
  - Listed, located indoors and installed above the flooring
Appendix R Light Straw-Clay Construction

Change Type: Addition

- Provisions for light straw-clay construction added.
- Light straw-clay walls are nonbearing infill around a structural frame.
- Errata in the first printing of the IRC

Appendix S Strawbale Construction

Change Type: Addition

- Provisions for strawbale construction have been added.
- Strawbale walls may be bearing walls or nonbearing infill around a structural frame.

Code Changes

Of the changes covered thus far, which will have the most impact on your job?
Final Reflection

This slide will help the learner to reflect on the day and what they will take back to the job and apply.

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