



Town of Castle Rock  
Development Services Building Division  
Contractors Luncheon  
Philip S Miller Park - Mill House  
1375 W. Plum Creek Parkway

January 9<sup>th</sup> 11:30AM-1:00PM

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### AGENDA

Welcome, Joseph Montoya, Chief Building Official

- Residential Fire Sprinkler Code
- 2018 End of Year Review
- Future Code Q & A - Review of Significant Changes

Chick-fil-A Lunch Provided by the Town of Castle Rock

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**Next Luncheon:**  
**February 13<sup>th</sup>**  
**Sponsor Opportunities Available**

*Sponsor opportunity for the upcoming luncheons:*

Contact : [Buildingcounter@crgov.com](mailto:Buildingcounter@crgov.com)

Development Services Technicians: Diane Maki, Cindy Brooks, Tracy Shipley, Jenn Bigham, Ben Christensen



**CONTRACTORS LUNCHEON**  
**January 9, 2019**  
**Meeting Summary**

**Welcome:** Joseph Montoya, Chief Building Official

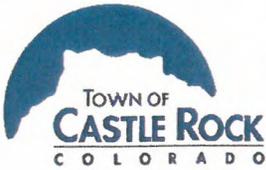
- Joseph welcomed all attending the luncheon
- Joseph thanked Town staff for organizing and setting up the food for the luncheon

**Greywater Update:** Jeanne Stevens, Engineering Manager, Castle Rock Water

- Ordinances passed to allow greywater systems in the Town (only in new home construction).
- Greywater is water taken from showers and tubs used to flush toilets. Uses ultraviolet or chemical disinfection.
- Once systems are approved by staff and pass inspection, it becomes property of the homeowner. Provides a water savings to homeowner.

**Residential Fire Sprinklers:** Joseph Montoya, Chief Building Official

- Sprinklers are regulated under plumbing in CO – explained transition from fire inspection to building inspection. Sprinklers are a requirement, but the Town is amending it out of the code and instead, is proposing underfloor protection for floor joists in unfinished basements as an added fire protection to homeowners and first responders. See APA R425, SR405 for methods of protection.
- Systems must comply with NFPA or Section P29-04. Piping must comply with Section P906.
- Explained where in the home sprinklers are required and not required.
- This was discussed with Fire Chief Brian Dimock, as well as at numerous stakeholder meetings. Joseph asked everyone for their feedback on what works and what doesn't work – need real world examples. Joseph asked for everyone's input whether or not they want the Town to move in this direction.
- Joseph reported that homeowners of new construction homes are tearing out the basement drywall in order to access plumbing and electrical to finish their basements.



**2018 Code Adoption:** Joseph Montoya, Chief Building Official

- The 2018 Municipal Code is planned for adoption in the 1<sup>st</sup> quarter of 2019 and to be implemented by July.
- Encouraged everyone to review the IRC Change Book that explains the code changes

**Code Changes:** Jon White, Building Inspector Supervisor & JR Trout, Sr.  
Combination Building Inspector

Code Changes are Related to:

- Windows: Low E windows will meet new requirements. Wind loads are a factor due to hurricane strength winds in CO and is being evaluated.
- Electrical Codes: Arc fault breakers – kitchens will be required to have AFCI and GFCI wall outlets. Garages will be required to have 1 outlet per car space.
- Solar: The code will have more stringent requirements.
- Code Amendments: Title 15 mostly stayed the same or else removed some amendments since they are now written into the code.
- The IRC has specific deck caisson requirements.

**Other Reminders:**

- Keep sidewalks clear
- Maintain builder signs
- Deliveries – do not block emergency access
- Register for March 4-8 CO ICC classes being offered - \$90/day or \$400/week – Town staff will be attending so be mindful of skeleton crew during that week.

**Closing Remarks:**

- Working on electronic inspection record in lieu of the cards to help facilitate quicker CO process.
- The following Town Staff were identified and thanked for their work - Building Inspectors, Plans Examiners, DESC staff, Development Technicians.
- Next Luncheon is Feb. 13<sup>th</sup> – contact staff to sponsor next meeting.

# Residential Fire Sprinklers

Joseph Montoya  
Chief Building Official  
Town of Castle Rock

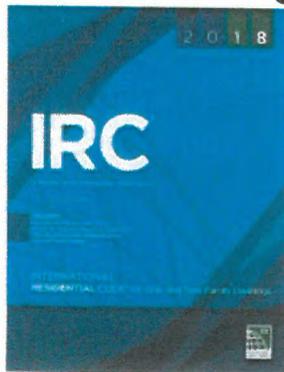
# Residential Fire Sprinklers



- Are considered in the State of Colorado to be **“PLUMBING”**

# Residential Plumbing in Castle Rock

- Through adoption of Title 15
- International Residential Code
- International Plumbing Code



# History ?

- Early 2004 Met with Fire Marshal to discuss how plumbing inspectors would feel about inspecting residential fire sprinklers.
- 2006-2009 many discussions regarding residential fire sprinklers happening at the State and National level
- 2009 IRC Sprinklers are put into the code
- 2012, 2015, 2018 Residential Fire Sprinklers are STILL in the code

# Residential Fire Sprinklers as PLUMBING

IRC P-2904

- The system complies with NFPA 13D or Section P2904.
- The piping material complies with Section P2906.
- The system does not contain antifreeze.
- The system does not have a fire department connection.

## Sprinklers required in ALL areas of Residential Dwelling Unit **EXCEPT**

- Attics, crawl spaces and normally unoccupied concealed spaces that do not contain fuel-fired appliances do not require sprinklers. In *attics*, crawl spaces and normally unoccupied concealed spaces that contain fuel-fired equipment, a sprinkler shall be installed above the equipment; however, sprinklers shall not be required in the remainder of the space.

Sprinklers required in ALL areas of Residential Dwelling Unit **EXCEPT**

- Clothes closets, linen closets and pantries not exceeding 24 square feet in area, with the smallest dimension not greater than 3 feet and having wall and ceiling surfaces of gypsum board.
- Bathrooms not more than 55 square feet in area.

Sprinklers required in ALL areas of Residential Dwelling Unit **EXCEPT**

- Garages; carports; exterior porches; unheated entry areas, such as mud rooms, that are adjacent to an exterior door; and similar areas.

# Sprinklers

- Sprinklers shall be new listed residential sprinklers and shall be installed in accordance with the sprinkler manufacturer's instructions.
- Sprinklers shall have a temperature rating of not less than 135°F and not more than 170°F.

## Intermediate temperature sprinklers.

Sprinklers shall have an intermediate temperature rating not less than 175°F and not more than 225°F where installed in the following locations:

- Directly under skylights, where the sprinkler is exposed to direct sunlight.
- In *attics*.
- In concealed spaces located directly beneath a roof.
- Within the distance to a heat source as specified in Table P2904.2.2.

# Intermediate temperature sprinklers.

**TABLE P2904.2.2  
LOCATIONS WHERE INTERMEDIATE TEMPERATURE SPRINKLERS ARE REQUIRED**

HEAT SOURCE	RANGE OF DISTANCE FROM HEAT SOURCE WITHIN WHICH INTERMEDIATE TEMPERATURE SPRINKLERS ARE REQUIRED <sup>a, b</sup> (inches)
Fireplace, side of open or recessed fireplace	12 to 36
Fireplace, front of recessed fireplace	36 to 60
Coal and wood burning stove	12 to 42
Kitchen range top	9 to 18
Oven	9 to 18
Vent connector or chimney connector	9 to 18
Heating duct, not insulated	9 to 18
Hot water pipe, not insulated	6 to 12
Side of ceiling or wall warm air register	12 to 24
Front of wall mounted warm air register	18 to 36
Water heater, furnace or boiler	3 to 6
Luminaire up to 250 watts	3 to 6
Luminaire 250 watts up to 499 watts	6 to 12

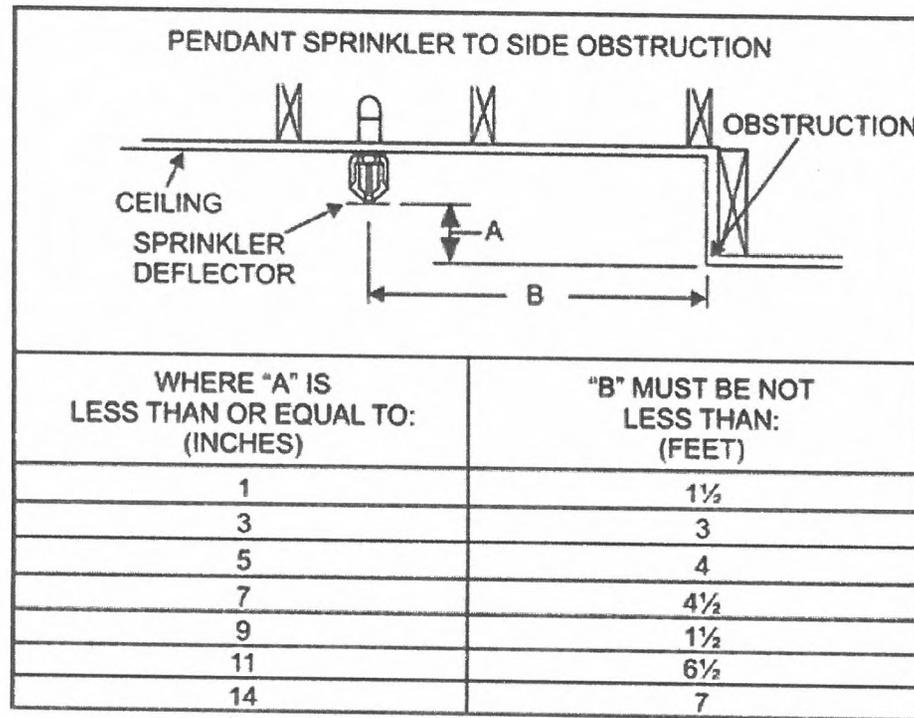
For SI: 1 inch = 25.4 mm.

- a. Sprinklers shall not be located at distances less than the minimum table distance unless the sprinkler listing allows a lesser distance.
- b. Distances shall be measured in a straight line from the nearest edge of the heat source to the nearest edge of the sprinkler.

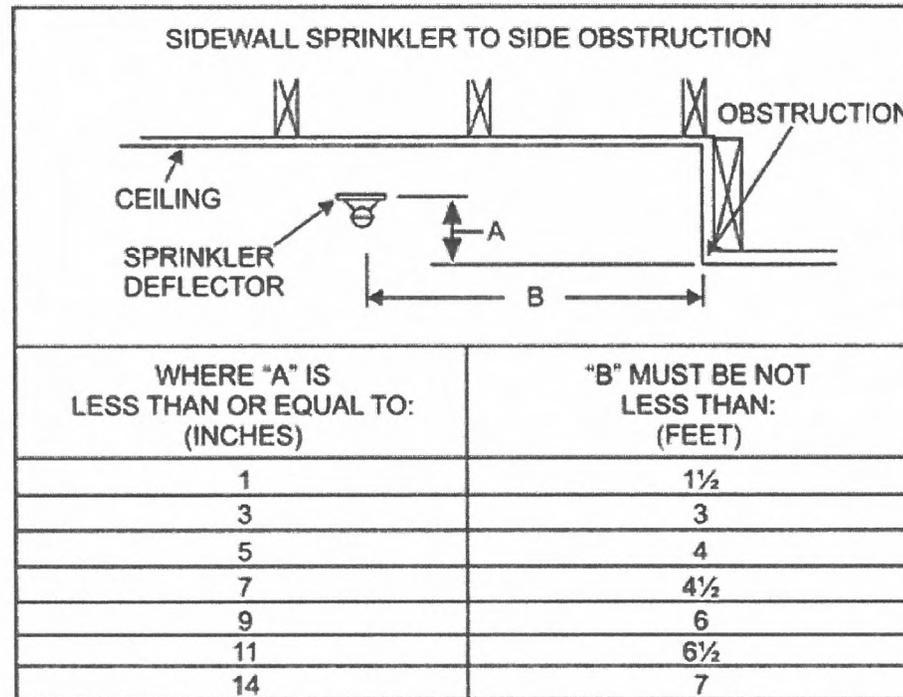
## Sprinkler coverage / Coverage area limit

- Sprinkler coverage requirements and sprinkler obstruction requirements shall be in accordance with the code.
- The area of coverage of a single sprinkler shall not exceed 400 square feet and shall be based on the sprinkler *listing* and the sprinkler manufacturer's installation instructions.

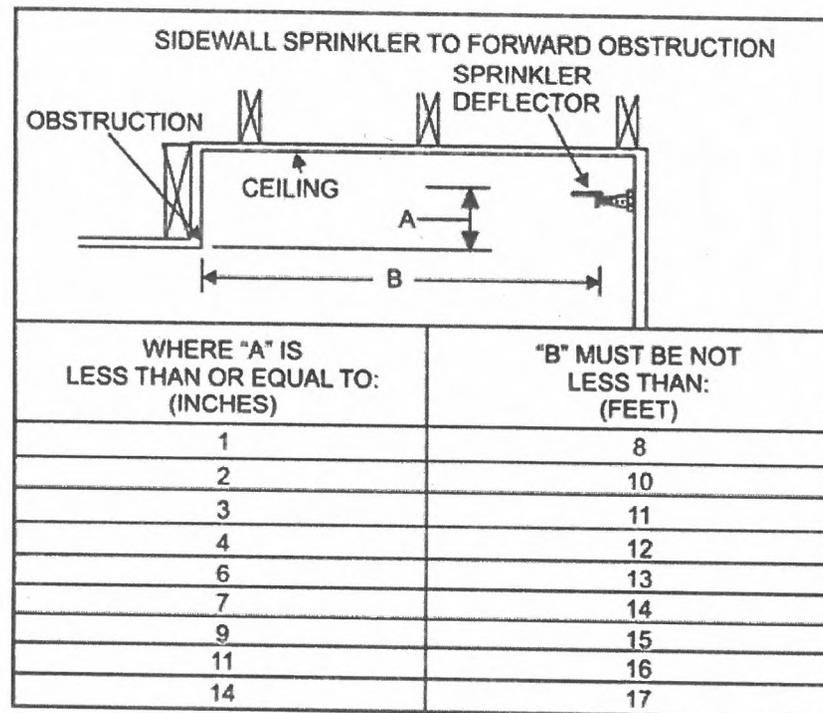
# Obstructions



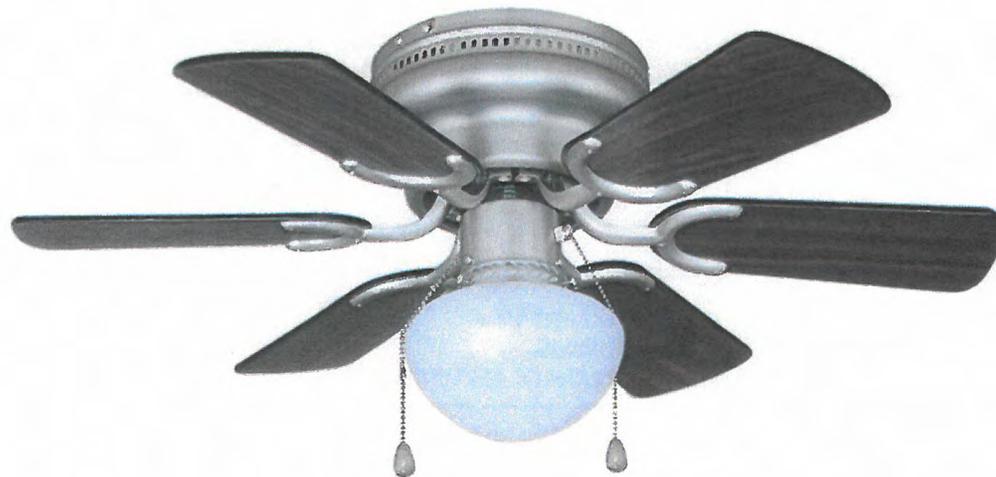
# Obstructions



# Obstructions



# Obstructions



# Obstructions





# Significant Changes IRC

Code cycle 2012-2018

# International Residential Code

## Administrative Changes to the IRC Chapter One

- Scope R 101.2
- Alternative Materials and Methods of Construction R 104.11
- Change of Occupancy R 105.1, R 110.1

# International Residential Code

## Scope R 101.2

Exception language changed to match the IBC bringing the two codes into alignment.

Basically it allows with the installation of a residential fire sprinkler:

- Live/Work units (in townhomes)
- Owner occupied lodging houses with 5 or fewer guests
- A care facility with 5 or fewer persons receiving (custodial, medical) care within a dwelling unit, and single family dwelling.

Permitted to be constructed in accordance with the IRC

# International Residential Code

## Alternative Materials and Methods of Construction R 104.11

Language changed to help users understand how to obtain approval of alternates

The Building Official shall have the authority to approve

Upon application of the owner or the owners authorized agent.

*The building official shall first finds that the proposed design is satisfactory and complies with the intent of the provisions in code in regards to **QUALITY, STREGNTH, EFFECTIVENESS, FIRE RESISTANCE, DURABILITY AND SAFETY.***

# IRC Definitions

## CHANGE OF OCCUPANCY

A change in the use of a building or portion of a building that involves a change in the application of the requirements of this code.

# IRC Definitions

~~Accessible~~ is now

Access (TO)

That which enables a device, an appliance or equipment to be reached by ready access or by a means that first requires the removal or movement of a panel, door or similar obstruction.

# IRC Definitions

~~Accessible Readily~~ is now

**READY ACCESS (TO)**. That which enables a device, *appliance* or *equipment* to be directly reached, without requiring the removal or movement of any panel, door or similar obstruction.

# IRC Definitions

**Cleanout** was slightly changed to remove the word accessible and now reads

An ~~accessible~~ opening in the drainage system...

And

**Supply Fitting** (under FIXTURE FITTING) for similar reasons now reads

A fitting that controls the volume or directional flow or both of water and that is either attached to or ~~accessible~~ accessed from a fixture or is used with an open or atmospheric discharge.

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## CRAWL SPACE NOW DEFINED

### **CRAWL SPACE.**

An underfloor space that is not a basement.

# IRC Definitions

New definitions added

## **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

## **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. notification appliance in a single unit.

Building