



Proudly Serving Rural Routt County * City of Steamboat Springs * Town of Hayden * Town of Oak Creek * Town of Yampa * Routt County School Districts

Policy: 2018 ICC Building Code Adoption Seismic Category C

Date: 02/23/2021

The Routt County Regional Building Department has composed a Seismic Design Category C Policy to provide our Professionals with clear information on the adoption of the 2018 ICC International Residential Building Code and the 2018 ICC International Building Code respectively.

Through our Code Adoption Processes within each Jurisdiction including; Routt County, Town of Hayden, Town of Yampa, Town of Oak Creek, and City of Steamboat Springs it was voted and approved that all of Routt County will be considered a Seismic Design Category C in respect to both the IRC and IBC Design standards. No Jurisdictions in Routt County have Adopted nor Accepted the Seismic Design Category D designation that is showing in the 2018 IRC in Figure R301.2(2), nor have we adopted or accepted ASCE 7-16 Design Code Reference Document that will display properties as Seismic Category D designation in certain areas. Please note, both the IRC Map and ASCE 7-16 will display certain properties as a Seismic Design Category D, the map in the 2018 IRC has a dark circle displaying this Seismic Category D designation that is centered over the City of Steamboat Springs, and extends outward into Rural Routt County approximately 17 mile total radius. When working within ASCE 7-16 using web link <https://seismicmaps.org/> You will find that properties located in the Town of Oak as an example, would be identified as a Seismic Design Category D designation, this would also be the case for any property you pulled up within the City of Steamboat Springs as well as an example. However, the Routt County Regional Building Department and all Jurisdictions we serve voted this down, and we refused to accept the Seismic Design Category D designation throughout all of Routt County.

Routt County Regional Building Department 2018 IBC Policy Amendment to Section 1613:

2018 IBC Section 1613 Earthquake Loads is hereby amended to read as follows:

1613.1 Scope. Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motion and accordance with ASCE 7, excluding Chapter 14 and Appendix 11A. The seismic design category for a structure is permitted to be determined in accordance with Section 1613 or ASCE 7.

Exceptions:

1. Detached one- and two-family dwellings, assigned to Seismic Design Category A, B or C, or located where the mapped short-period spectral response acceleration, S_s , is less than 0.4 g.
2. The seismic force-resisting system of wood-frame buildings that conform to the provisions of Section 2308 are not required to be analyzed as specified in this section.

Routt County Regional Building Department

136 6th Street, Ste 201, Steamboat Springs, CO 80487 PH: 970-870-5566 Fax 970-870-5489 Email: Building@co.routt.co.us

3. Agricultural storage structures intended only for incidental human occupancy.
4. Structures that require special consideration of their response characteristics and environment that are not addressed by this code or ASCE 7 and for which other regulations provide seismic criteria, such as vehicular bridges, electrical transmission towers, hydraulic structures, buried utility lines and their appurtenances and nuclear reactors.

Routt County Building Department Local Policy Amendment to Section 1613 Earth quake Loads: All properties within Routt County Incorporated and Unincorporated Jurisdictions have been adopted and approved to be a Seismic Design Category C designation through our Building Code Adoption Approval Processes. Structures shall be designed in accordance with our local amendment policy using a Seismic Design Category C designation as the base level design standard. When approved by the Structural Engineer of Record through review of the Geotechnical Soils Report and Soils Site Class, the Seismic Category may be reduced by the Engineer of Record based on the known Soils Site Class and in accordance with ASCE-7 and Chapter 16 of the IBC.

Structural Engineers Acceptable Design Parameters Local Routt County Building Department Policy: The Routt County Building Department has developed these design parameters to align with our Local Code Adoptions that were approved designating all of Routt County a Seismic Design Category C. This Policy has been created to provide maximum values for SDS and SD1 respectively to be used in the mapped areas throughout Routt County that have been designated Seismic Category D in accordance ASCE 7-16 USGS Seismic Design Data Map found at <https://seismicmaps.org/>. The parameters below may be used by Structural Engineers based on the Risk Factor of the Building to perform calculations to determine structural designs. The below parameters may be used with Site Class D- Default (See Section 11.4.3) being set on the ASCE 7-16 USGS Seismic Design Data Map found at <https://seismicmaps.org/>. Lower values may be used if justified by soil Site Class and resulting site-specific ground motion parameters set forth in ASCE 7-16 and USGS Seismic Design Data Map and approved by the Code Official.

- **Risk Category I, II, and III Building: SDS = 0.333 and SD1 = 0.133**
- **Risk Category IV Building: SDS = 0.499 and SD1 = 0.199**

The intent of setting these parameters and values is to help support Structural Engineers in designing buildings within the spirit of our Locally Approved Code Adoptions designating a standard Seismic Design Category C throughout all of Routt County, to avoid conflicts in what data would otherwise be provided through ASCE 7-16 USGS Seismic Design Data Map found at <https://seismicmaps.org/>.

Routt County Regional Building Department 2018 IRC Code Adoption

Table R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA, is completed as follows:

- Ground Snow Load – Case Study Area contact the Building Department for Ground Snow Load Valuations per site.
- Climate Zone 7
- Wind Speed – 115 MPH (ultimate design wind speed)
- Topographic Effects – No
- Seismic Design Category – C Note: When approved by the Structural Engineer of Record through review of the Geotechnical Soils Report and Soils Site Class, the Seismic Category may be reduced

Routt County Regional Building Department

136 6th Street, Ste 201, Steamboat Springs, CO 80487 PH: 970-870-5566 Fax 970-870-5489 Email: Building@co.routt.co.us

by the Engineer of Record based on the known Soils Site Class and in accordance with ASCE-7 and Chapter 16 of the IBC.

- Subject to Damage by Weathering – Severe
- Subject to Damage by Frost line Depth – 48 inches (1220mm)
- Subject to Damage by Termite – None to slight
- Subject to Damage by Decay – None to slight
- Winter Design:
 - Outdoor Winter Design Dry-Bulb Temperature – -15°F (-26°C)
 - Indoor Winter Design Dry-Bulb Temperature: 70° F (21° C)
 - Coincident Wet Bulb: 56° F (13° C)
 - Heating temperature Difference: 85° F (29° C)
- Summer Design:
 - Outdoor Summer Design Dry-Bulb Temperature: 85° F (29° C)
 - Indoor Summer Design Dry-Bulb Temperature: 75° F (24° C)
 - Design Grains: Varies based on weather data Range: -35 to -55
 - Cooling Temperature Difference: 10° F (-12° C)
- Elevation: Varies Elevation by address can be found at:
https://elevation.maplogs.com/poi/routt_county_co_usa.12879.html
- Altitude Correction: Varies
 - 7,000' 0.77
 - 8,000' 0.75
 - 9,000' 0.72
 - 10,000' 0.69
 - 12,000' 0.63
- Latitude : 40° North
- Ice Shield Underlayment Required – Yes
- Flood Hazards – FIRM, February 4, 2005
- Air Freezing Index – Steamboat 2239
- Mean Annual Temperature – 40-45°F (4.5-7.2°C)
- Ground Snow Load Values are Governed by Routt County Regional Building Department based on geographic location. Please visit our home page and click on Ground Snow Load Values for site-specific information.

Sincerely,



Todd Carr, Building Official
Routt County Building Department

Routt County Regional Building Department

136 6th Street, Ste 201, Steamboat Springs, CO 80487 PH: 970-870-5566 Fax 970-870-5489 Email: Building@co.routt.co.us