



San Juan County
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POLICIES/PROCEDURES/INTERPRETATIONS

**Determination of Loft, Mezzanine, or Sloped Ceiling Floor Area
& Ladder Access Restrictions**

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ISSUE: What area is to be included in determining the loft or mezzanine square footage when determining "floor area" and when allowing access by a ladder; pursuant to the Exception to Section R311.1 of the International Residential Code (IRC) or per the allowance of Section 1009.12 of the International Building Code (IBC)?

ANALYSIS: The IRC does not define either "Floor Area" or the "Means of Egress". However the IBC does. Additionally, Section R201.3 of the IRC states that "Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council.

Therefore the definitions for "Floor Area" and the "Means of Egress" of the IBC apply to the IRC.

The IBC defines gross "FLOOR AREA" as:

"The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts."

The IBC defines the "MEANS OF EGRESS" as:

"A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge."

The building code utilizes the "Floor Area" definition for determining the means of egress requirements of a building. Additionally, from the definition of "Means of Egress", it is clear that a means of egress is only required from occupied portions of a building.

The IRC requires minimum ceiling heights and/or room dimensions for habitable spaces, basements, and other occupied areas. The IBC contains similar requirements for these areas and for "Occupiable Spaces".

For sloped ceiling areas, both the IRC and IBC limit the minimum habitable and occupiable area of a room to that which is 5 or more feet in height.

Another issue is that neither the IRC nor IBC specify minimum requirements for these "Loft Ladders". However, guidance may be taken from other code required ladders. Sections 306.5 of both the International Mechanical Code and International Fuel Gas Code provide minimum requirements for permanent ladders provided to access and service roof top equipment. These Sections state in part:

"Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be a minimum of 18 inches (457 mm) between rails.
5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m²) per square foot.
7. Ladders shall be protected against corrosion by approved means."

POLICY: The following policy shall apply to lofts, mezzanines, and sloped ceiling areas.

- The "Floor Area" shall only apply to those spaces complying with Occupiable or Habitable spaces as follows:
 - Occupiable portions of lofts, mezzanines, and sloped ceiling areas shall be those areas which have a minimum ceiling height of 6'4" and shall include all adjacent areas with a minimum ceiling height of 5'.
 - Habitable or Occupiable portions of lofts, mezzanines, and sloped ceiling areas, as dictated by design, shall be those areas which have a minimum ceiling height of 7' and including all adjacent areas with a minimum ceiling height of 5'.
 - Habitable portions of lofts, mezzanines, and sloped ceiling areas shall also contain an area of at least 35 square feet with a minimum of 7' ceiling height.
- Spaces not meeting the minimum room dimensions for habitable or occupiable space are not required to be provided with permanent access; nor are they included in "Floor Area" determinations. These areas may be accessed by non-permanent ladders or by folding, collapsible, or retractable ladders.
- Where the habitable or occupiable "Floor Area" is less than or equal to 200 sq ft, and does not contain the primary bathroom or kitchen, the area shall be allowed to be accessed by an "Alternating Tread Device" constructed in accordance with Sections 1009.9.1 and 1009.9.2 of the 2006 IBC or a permanent ladder complying with the following minimum requirements:
 1. The side railings shall extend above the loft, mezzanine, and sloped ceiling area floor not less than 30 inches (762 mm).
 2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.
 3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
 4. There shall be a minimum of 18 inches (457 mm) between rails.
 5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.
 6. Ladders, exposed to the weather, shall be protected against corrosion or decay by approved means."
 7. Folding, collapsible, or retractable ladders/stairs shall not be considered "permanent".
- Where the habitable or occupiable "Floor Area" is more than 200 sq ft, the area shall be required to be accessed by permanent code compliant stairs.

Modifications to this policy may be permitted by the building official where special site specific conditions exist.