



RESIDENTIAL ATTIC REMODELINGS

ZONING: Buildings of three or more residential units which increase the room count or number of units as a result of remodeling the attic space will require our Zoning staff approval prior to the issuance of a building permit.

1 OR 2 FAMILY DWELLING UNIT EXPANSIONS INTO UNFINISHED ATTIC SPACE (NO INCREASE IN NO. OF UNITS)

1. **Floor Joists:** Frequently attic "floors" were not designed to be used as residential floors carrying a potential load of 55 pounds per square foot. **A Cross-section (see sample) shall be provided** indicating the size and spacing of floor joists and the distance they span from bearing wall to bearing wall. Show new knee walls between the rafters and the floor joists which may transfer more additional loads to the floor.
2. **Stairs:** Stairs to attics are usually inadequate to be used for finished habitable space.
 - a. The maximum rise allowed for standard stair treads is 7 3/4 inches.
 - b. The minimum stair tread depth (measured horizontally from the vertical projections of the tread nosing) is 10 inches.
 - c. The minimum headroom, measured vertically above the line of the stair tread nosing, is 6 foot - 8 inches.
 - d. The minimum stair width is 36 inches. (Reductions may be approved by the inspector)
 - e. Spiral stairs shall have a minimum width of 26" with each tread having a 7-1/2" minimum tread width at 12" from the narrow edge. All treads shall be identical, and the rise shall be no more than 9-1/2". Minimum of 6'-6" headroom shall be provided.
 - f. Winding stairs are permitted, provided that the width of the tread at a point not more than 12" from the side where the treads are narrower is not less than 9" and the minimum width of any tread is not less than 6". The required Handrail shall be on the side with the narrow treads.
 - g. A Landing is required at the top and bottom of each stairway. The landing must be at least as wide as the stairway served and 36" in the direction of travel.
3. **Ceiling Height:** Habitable rooms, hallways, and bathrooms shall have a ceiling height of not less than 7'. Any projections below 7' **must be shown in a Cross-Section drawing** for Plan Examiners to review. For Rooms with Sloped ceilings, at least 50% of the required floor area is allowed to be below 7', with no portion of the required floor area less than 5'. Bathrooms shall have a minimum of 6'8" at the front of the water closet and in the tub and shower area.

4. **Light and Ventilation:** All habitable rooms shall be provided with aggregate glazing area of not less than 8% of the floor area of such rooms. Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4% of the floor area being ventilated.
NOTE: The 2015 MN State IRC allows mechanical ventilation and electric lighting to substitute for windows, except that sleeping rooms still require at least 1 emergency escape and rescue opening (see below). Talk to the Plan Examiners if you wish to use this substitution option.

5. **Emergency Escape and Rescue Opening:** Every Bedroom shall have at least one openable egress window complying with the following:

- Min. Clear Opening of 5.7 square feet.
- Min. Clear Opening Width of 20".
- Min. Clear Opening Height of 24".
- The bottom sill height shall not be more than 44" above the finished floor.

Floor grade windows shall have a minimum net clear opening of 5 Square feet. If sprinklers are installed per IRC P2904 or NFPA 13D. or if the home was built before Aug 1 2008 and has a sprinkler system per IRC 2904 or NFPA 13D egress windows will not be required.

6. **Energy Code:** Minnesota State Law requires habitable space to meet minimum insulation requirements for the conservation of energy. It is frequently difficult to meet these requirements without adding additional depth to sloped rafters and providing flat ceiling areas with increased insulation. (NOTE: A ventilation space above the insulation is to be provided. Unvented roofs require special approval and must be requested in writing).

The basic standards roughly work out to be:

- a. Ceilings with an R-value of 49.
- b. Sloped ceiling areas at least R-30.
- c. Walls with an R-20 13+5.
- d. Standard double or triple glazed windows (min u-value=0.32) that meet minimum light standards previously described. Sky lights a min u-value+0.55

NOTE: The use of Low-E, High-R, or Triple-glazed windows makes it much easier to meet the requirements for the **overall** project.

- e. Rim joist areas with an R-20.

7. **Required Floor Area:** Habitable rooms shall have a floor area of not less than 70 square feet. Rooms must be a minimum of 7' in any horizontal dimension. No more than 50% of the required floor area may be less than 7' in height, area below 5' will not contribute to the required floor area.

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