DEPARTMENT OF SAFETY AND INSPECTIONS
Ricardo X. Cervantes, Director

CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
Saint Paul, Minnesota 55101-1806

***Telephone**: 651-266-8989*
***Facsimile**: 651-266-9124*
***Web**: wwwstpaul.gov/dsi*

RESIDENTIAL ATTIC REMODELINGS

ZONING: Any increase in the number of units as a result of remodeling a previously unfinished attic space will require our Zoning staff approval prior to the issuance of a Building Permit. Any increase in **Room Count,** as defined in the Zoning Code, for 3 or more unit buildings will require Zoning approval even if there is no increase in the number of units.

NOTE: The creation of a separate unit **ABOVE** the 2nd floor will **ALWAYS** require **TWO EXITS** from the unit down to grade level. The other potential requirements are too numerous to record in this handout; verify these requirements with the Plan Examiners before proceeding beyond design development drawings.

---

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

POTENTIAL PROBLEMS (AND NEEDED INFORMATION ON PLANS)

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. New knee walls between the rafters and the floor joists may transfer more additional load 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 8 inches.
   b. The minimum stair tread depth (measured horizontally from the vertical projections of the tread nosings) is 9 inches.
   c. The minimum headroom, measured vertically above the line of the stair tread nosing's, is 6 foot - 8 inches.
   d. Winding stairs, whose treads come to a triangulated point at the inside of turns **ARE NOT ALLOWED** unless the minimum tread width is **AT LEAST 6 INCHES.**
   e. Spiral stairs must have 26" min. width and can only serve as exit for an area of 400 sq. ft. or less
   f. The minimum stair width is 36 inches. (30"is OK for older homes)
   g. A landing, equal in length to the width of the stair, is required at the bottom of a stair.
   h. Additionally, headroom is frequently a problem at the top of stairs when the path of travel doubles back under a dormer or sloped rafter area. This area should have a headroom clearance of at least 6-1/2 feet. Any deviation from this standard must be clearly shown on a cross-sectional drawing for the Plan Examiners to evaluate.

3. **Ceiling Height:** Each habitable room must have a ceiling height of 7 foot. Rooms with sloped ceilings will be reviewed by the Plan Examiners (via cross-sectional drawings) to determine if there is sufficient area of each habitable room at this ceiling height.

4. **Light and Ventilation:** Present code requires habitable rooms to be provided with natural light by means of exterior glazed openings (windows and skylights) with an area not less than 8% of the floor area of each room (with a 8 square foot minimum). For sloped ceiling areas, only the area at or above a ceiling height of 5 feet is required to be used for this calculation. The Ventilation requirement is for open-able windows or doors equal to 4% of the floor area (4 square foot minimum) for each habitable room. (Indicate individual sash glass sizes on the floor plan drawing.) **NOTE**: The 2000 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:** The habitable rooms of former attic spaces are almost always potential sleeping areas (i.e., bedrooms) and will be so reviewed. As part of the light and ventilation requirement, each sleeping room must be provided with an exterior door or window which meets the following requirements: (See Handouts)

   a. An open-able area (by normal opening procedures) of at least 5.7 square feet (821 Square Inches)

      1. Minimum height on the opening of wide windows, such as double-hung windows, is 24 inches. (For instance, a 34-1/4 inch wide X 24 inch high opening qualifies).
      2. Minimum width of tall narrow windows, such as casements or one side of a glider window, is 20 inches. (For instance, a 20 inch wide X 41 inch high opening will minimally qualify.)

   b. A maximum height of 44 inches from the floor to a normal sill. Skylights may be used provided the bottom of the open-able portion is not more than 44 inches from the floor.

   Indicate individual sash glass size or open-able area on the floor plan drawing.

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 a R-value of 38 (12 inches of fiberglass or equivalent).
   b. Sloped ceiling areas at least R-30
   c. Walls with an R of 20 (6 inches of fiberglass or equivalent).
   d. Standard double or triple glazed windows (min u-value=0.37) that meet minimum light standards previously described.
      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 of 19.

IF the plans (usually the cross-section[s]) clearly indicate the various materials, sizes, and insulation values, and the R or U-value of the windows is known; then the Plan Examiners can normally determine compliance with the Energy Code without the need to fill out an Energy Code Calculation Form.