

ATTIC FLOOR BEDROOMS – 1 & 2 FAMILY DWELLINGS (2ND OR 3RD FLOOR)

Minneapolis Construction Code Services
Informational Bulletin

Revised January 2009

Ceiling Height

2006 IRC Section R305: All ceilings must have a minimum height of seven (7) feet including kitchens, baths, hall, closets, etc. For a sloped ceiling, at least 50% of the floor area must have seven (7) foot ceiling height or higher. The floor area is measured from where the ceiling is at least 5 feet high.

Room Dimensions

2006 IRC Section R304: Habitable rooms must have a minimum floor area of 70 square feet, except kitchens, baths, closets and other similar rooms. No habitable rooms can be less than seven (7) feet in width, except kitchen. (Baths are not considered habitable rooms.)

Arrangement of Rooms

Minneapolis Code of Ordinance Section 244.830: Room arrangements shall be such that access to a sleeping room cannot be only through another sleeping room or a bathroom or toilet room.

Minneapolis Code of Ordinance Section 244.800: Rooms exclusively for sleeping must have a minimum of:

- 70 square feet for one person.
- 90 square feet for two persons
- 50 square feet for each additional person (maximum 4)

Light and Ventilation

2006 IRC Section R303: For light, there must be glass totaling 8% of the floor area in every habitable room of the dwelling unit.

For ventilation, an amount equal to half of the total area of the glass must be able to be opened or 4% of the total floor area, whichever is greater. Bathrooms, laundries and similar rooms must be provided with exterior openings a minimum of three (3) square feet, half of which must be able to be opened unless there is an adequate mechanical ventilation system.

Adjoining Rooms

2006 IRC Section R303.2: For purposes of light and ventilation, if rooms adjoin, they can be considered one room if half of the area of the common wall is open and unobstructed and is 10% of the floor area of the interior room but not less than 25 square feet. The minimum operable area to the outdoors shall be based upon the total floor area being ventilated.

Emergency Egress from Sleeping Rooms

2006 IRC Section R310: Basements and every sleeping room must have at least one (1) operable window or approved door to the exterior. **Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet.**

A window must have a **minimum net clear opening of 5.7 square feet. Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet.** Within this total figure, the minimum opening height has to be 24 inches and the minimum opening width has to be 20 inches. (**Note:** These two (2) minimums do not equal the 5.7 square feet.) If the width of the opening is only 20 inches, then the height must be over 41 inches. If the height of the opening is only 24 inches, then the width would have to be slightly over 34 inches.

The height from finished floor sill shall not exceed 44 inches.

Smoke Alarms

2006 IRC Section R313 and Minneapolis Code of Ordinance Section 244.915: When a sleeping room is added or created in an existing dwelling, the individual dwelling unit shall be equipped with smoke alarms located in each sleeping room and within an individual unit as required for new dwellings. The smoke alarms shall be interconnected and hard wired. Hardwired smoke alarms are required in new buildings and multiple dwellings.

Carbon Monoxide Alarms

Minnesota State Statute 299 F. 50: Carbon monoxide alarm shall be located within 10 feet of each room lawfully used for sleeping purposes.

Stair Requirements

Existing stairs serving second (2nd) or third (3rd) floor finished space (bedroom, recreation room, office, etc.) in attics shall meet the following minimum requirements:

- Stair width: 30" minimum
- Stair headroom: 6'6" minimum
- Stair rise: 8" maximum***
- Stair run: 9" minimum***
- Handrail: 30" – 38" in height
- Guardrail: 36" minimum height with intermediate openings less than 4" if new or alterations to existing required.

*****: Approved based on Plan Reviewer's decision.**

New Stairs shall meet current code standards:

- Stair width: 36"
- Stair headroom: 6'8"
- Stair rise: 7 ¾" maximum
- Stair run: 10" minimum
- Handrail: 34" – 38" in height
- Guardrail: 36" minimum height with intermediate openings less than 4" if new or alterations to existing required.

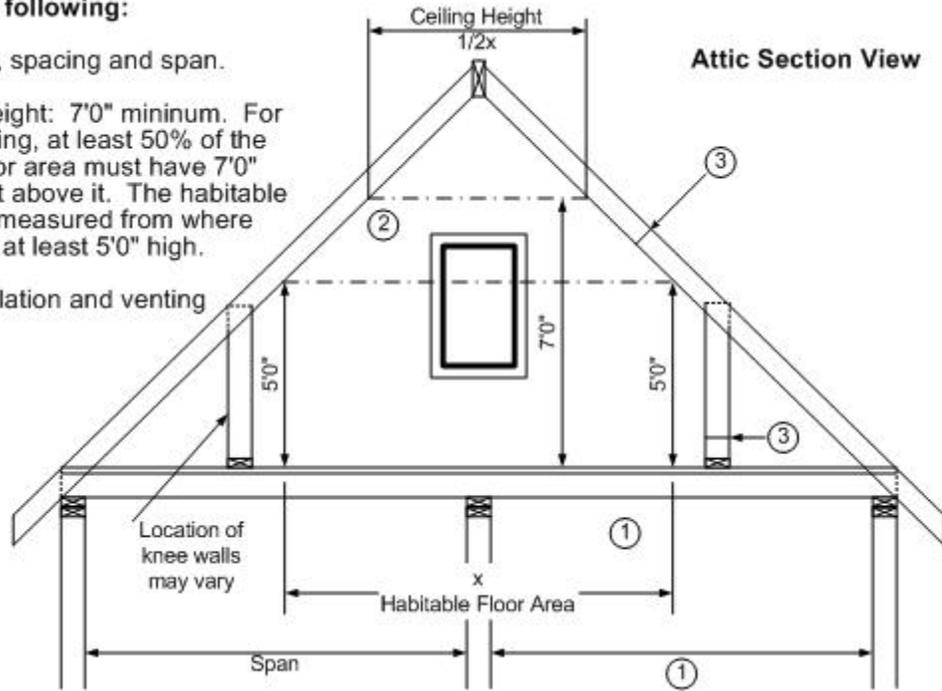
Additional Provisions Required for Two Family Dwellings

When the third (3rd) floor attic is used in conjunction with the second (2nd) floor dwelling in a duplex dwelling, the above conditions must be met as well as the following:

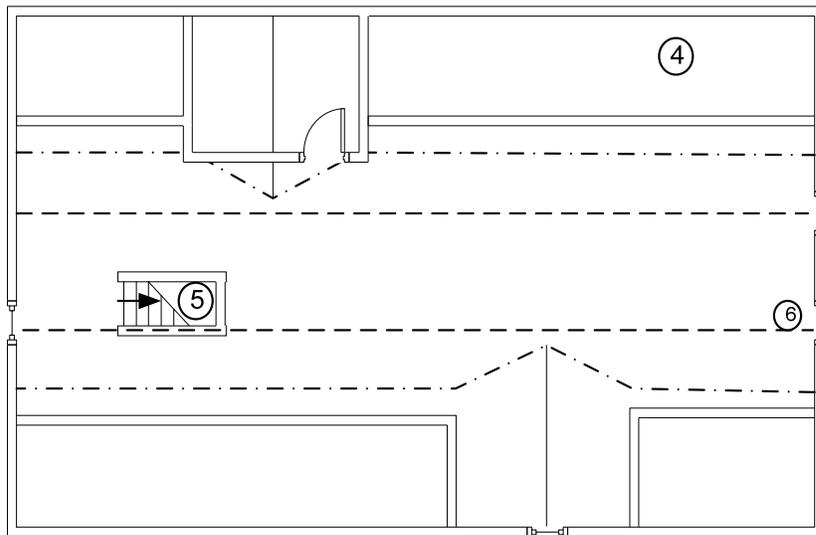
- Access to the 3rd floor attic must be provided within the 2nd floor unit/
- A dwelling unit may only have one kitchen.

Indicate the following:

1. Joist size, spacing and span.
2. Ceiling height: 7'0" minimum. For a sloped ceiling, at least 50% of the habitable floor area must have 7'0" ceiling height above it. The habitable floor area is measured from where the ceiling is at least 5'0" high.
3. Roof insulation and venting



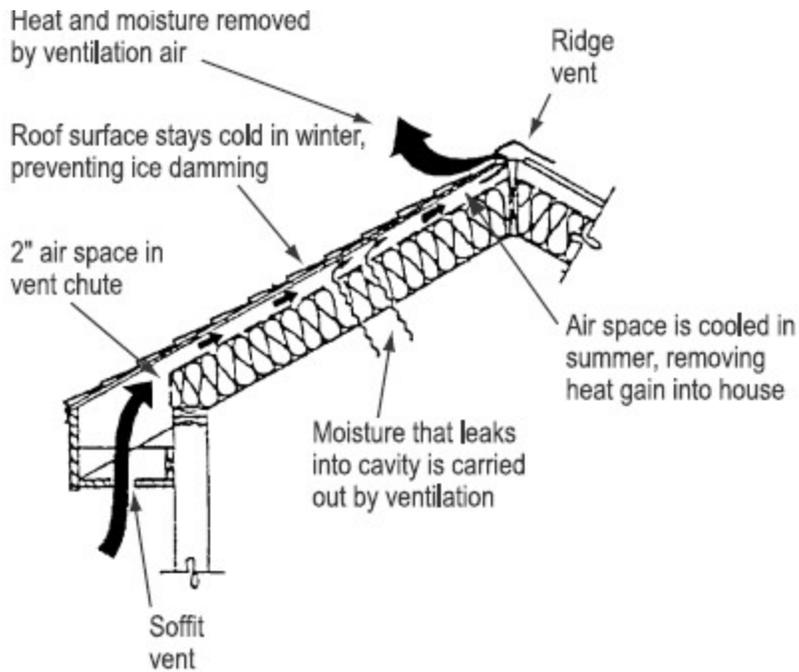
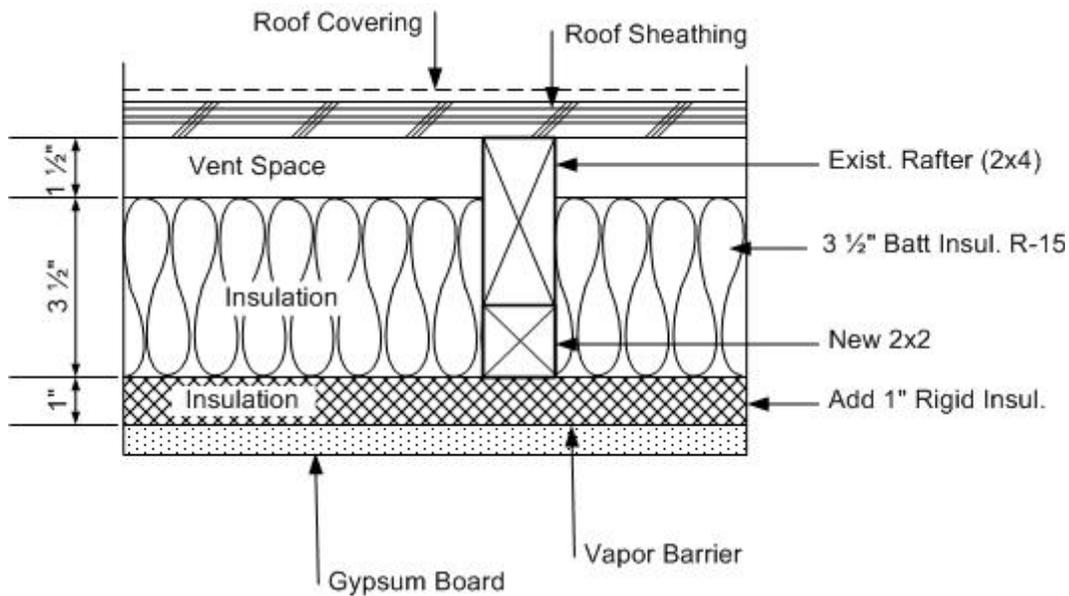
Attic Floor Plan Showing Ceiling Height



- - - - - Habitable floor area (where ceiling is at least 5' high)
- Minimum Ceiling Height (at least 50% of the floor area must have 7'0" minimum ceiling height.)

Indicate the following:

4. Room use (floor plan). Include all dimensions, window sizes, room use. Recommended scale is 1/4" per foot minimum scale.
5. One approved means of egress: An existing stair with minimum 9" treads; 8" maximum risers; minimum 30" wide and minimum 6'-6" headroom. A new stairway shall conform to 2006 IRC Building Code.
6. Light and Ventilation. For light, there must be glass totaling 8% of the habitable floor area with a minimum 10 square feet in every habitable room. For ventilation, an amount equal to half of the total area of glass must be operable.

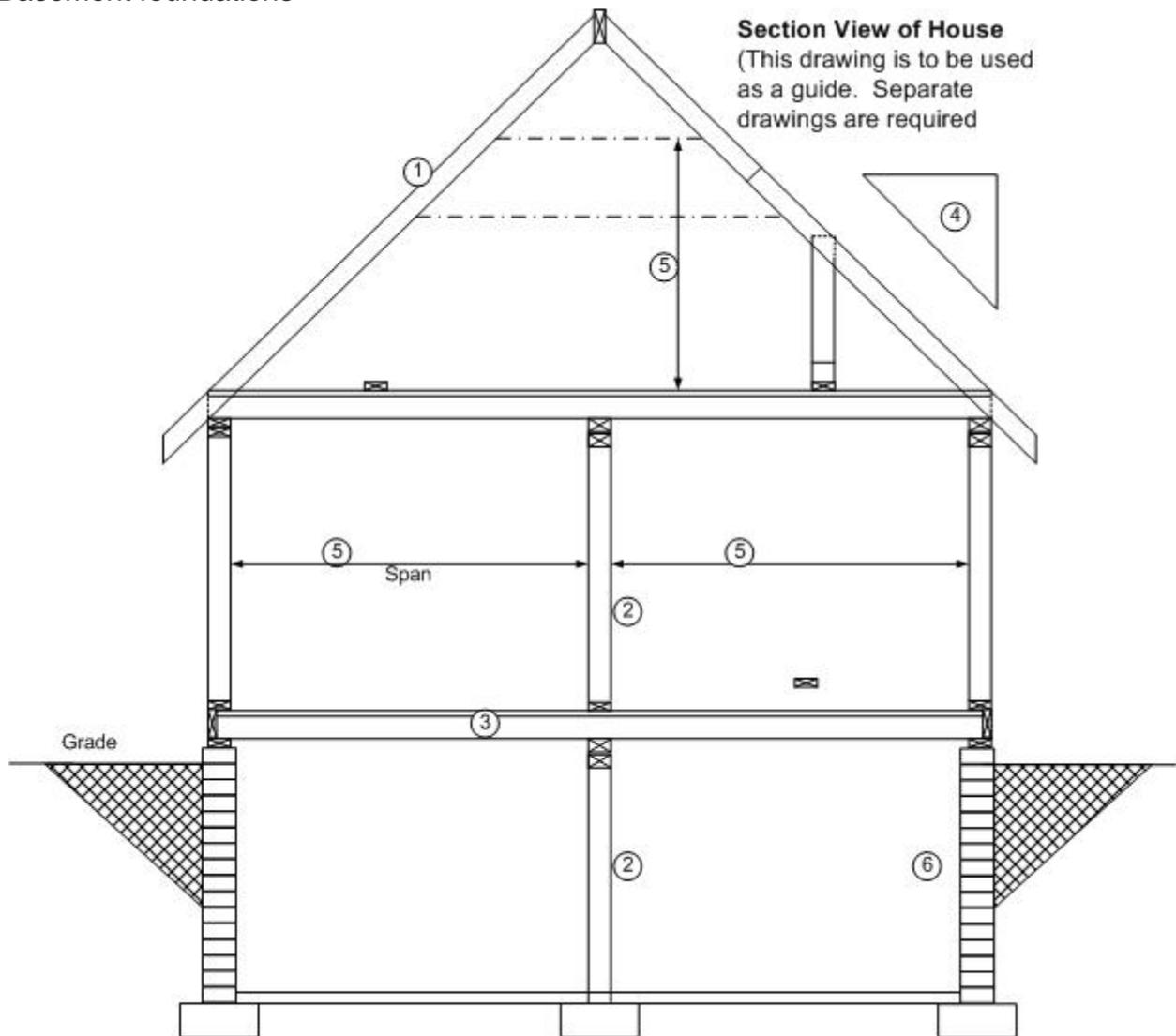


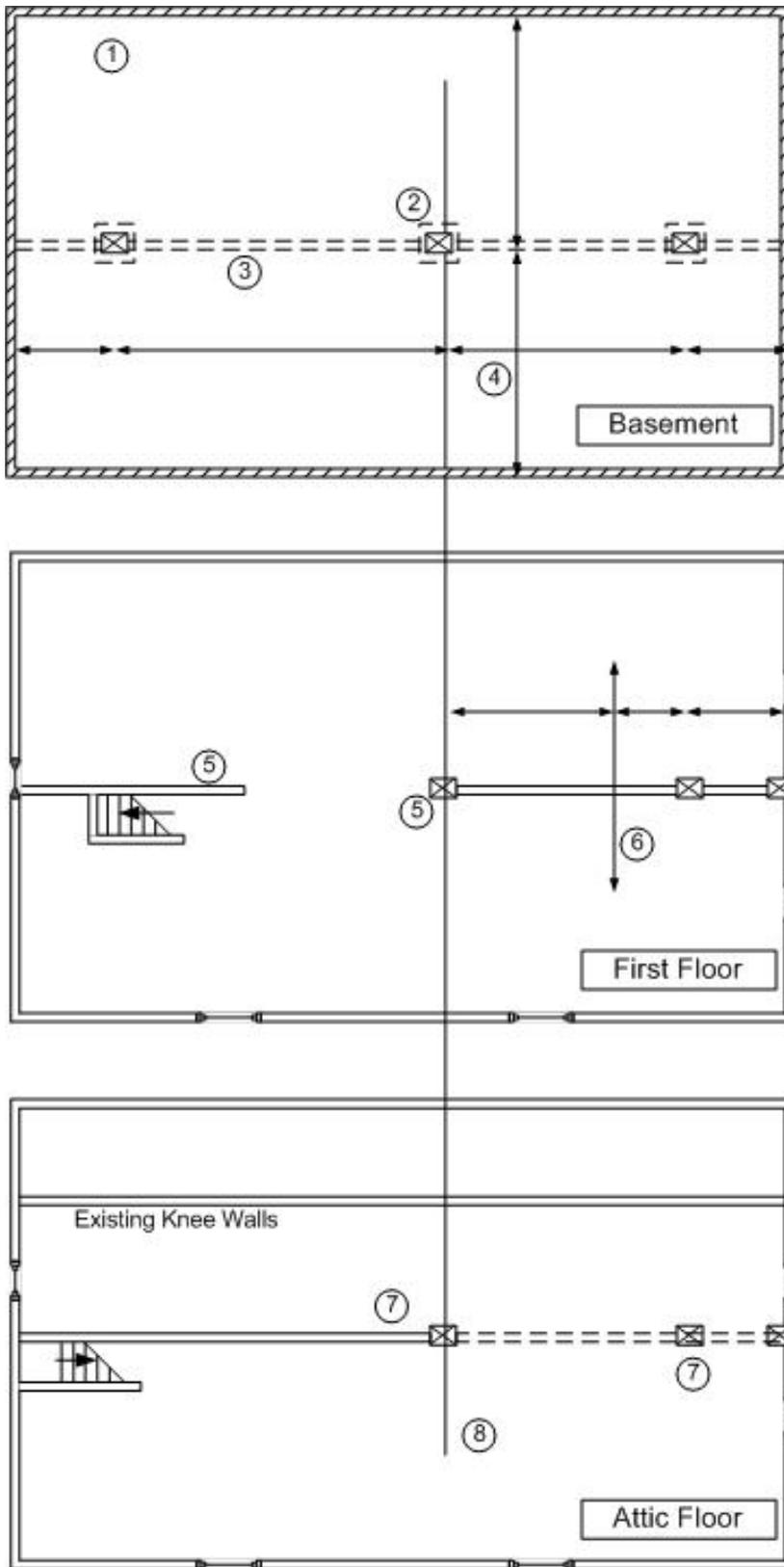
In a vented cathedral ceiling, air flow carries heat out of the roof assembly, preventing ice damming in winter and overheating in summer. It also removes any moisture that penetrates the rafter cavity. Typically, the ventilation air space is maintained by plastic “vent chutes” which should be perforated to allow moisture-laden air through.

Structural Information Needed to Issue Attic Expansion/Remodel Permit

Indicate the Following:

1. Size and spacing of new rafters (if applicable)
2. Location and dimensions of interior posts, beams or partitions
3. Floor joist sizes and spacing
4. Pitch of roof
5. Dimensions
6. Basement foundations





Floor Plan of House

(This drawing is a sample drawing to be used as guideline. Separate drawings are required)

Indicate the following:

1. Basement wall foundation – size of block
2. Existing posts – location, size, and material.
3. Beam size, material and distance between posts.
4. Length of joist span between supports.
5. Locations of posts or bearing walls.
6. Direction, size and spacing of attic floor joists.
7. Beams, posts or partitions to support new roof, if applicable
8. All posts must be continuous to basement foundations, if applicable

Include all area dimension and window type and glass sizes.



Frequently Asked Questions Attic Bedrooms – 1 & 2 Family Dwellings

Q: What is the minimum size allowed for a bedroom?

A: A bedroom shall be a minimum of seventy (70) square feet in area and not less than 7 feet in any horizontal dimension (2006 IRC, Section R304).

Q: What makes a room a legal bedroom?

A: A legal bedroom shall have a ceiling height of 7 feet (from finished floor to finished ceiling); one egress window or door direct to the exterior (per IRC Section R310); smoke detector (per IRC Section R313), 70 square feet of gross floor area, as well as light, ventilation and heating (per IRC Section R303).

Q: Is an egress window required in attic bedrooms on the 3rd floor?

A: Yes, one egress window or door direct to the exterior is required in each bedroom from the basement floor through the 3rd floor.

Q: What are the requirements for the ductwork when a heat recovery ventilator is located in an attic?

A: Heat recovery ventilators located in an attic need to be in conditioned spaces. They do go through a defrost cycle in the winter and require a drain for condensate removal. Penetrations through the ceiling and walls require a thermal barrier. Therefore, the ductwork needs to be of ridged metal and sealed. The ductwork should have a vapor barrier and be insulated to R-8 or greater.

Q: Can I heat the bedroom with electric baseboard heat?

A: Yes, if it is hard wired and runs off of a thermostat. All habitable spaces must have a heating system capable of maintaining 70 degrees measured at 3 feet above the floor.

Q: Can I install a separate furnace or boiler to heat the attic?

A: Yes, all gas heating equipment in bedrooms or adjoining rooms accessed through a bedroom, closets or bathrooms must be of a sealed combustion type.