

INTERIOR FINISH/REMODELING

Prior to beginning any remodeling or interior finish, a set of plans (including an existing view and a proposed floor plan) along with a completed building permit application must be submitted to the Inspection Department for review. The plans must show what is existing such as window openings, framed walls, exterior wall insulation, etc. The proposed floor plan must indicate the use of the rooms (ie. Bedroom, rec room, bathroom), the location of new walls to be constructed, door/window openings, etc. The permit application should indicate the amount of work to be done, what work if any was done when the house was built and to what extent. Any heating/mechanical work, plumbing work and/or electrical work will require separate permits. Please allow a minimum of seven to ten working days for the plan review process. You will be contacted by the Inspection Department when the permit is ready for issue.

SMOKE DETECTORS/CARBON MONOXIDE DETECTORS

A smoke detector is required at a point centrally located in the hallway or area giving access to each separate sleeping area, on each level of the house and in every sleeping room throughout the entire house. In areas and rooms being finished, the smoke detectors shall receive their primary power from the building wiring and be equipped with battery backup. Existing finished areas may be solely battery operated. CO Alarms are required in each dwelling located within ten feet of each sleeping room.

MINIMUM CLEAR DIMENSIONS

- 3'-0" Hall & Stairway Width
- 7'-0" Ceiling height in habitable rooms (living, sleeping, eating, cooking or halls)
- 2'-6" Floor space width for toilet (centered at 15") with 24" clearance in front

MINIMUM ROOM SIZE

Habitable rooms shall have a floor area of not less than 70 square feet and shall not be less than 7 feet in any horizontal dimension.

EGRESS (ESCAPE WINDOWS) AND WINDOW WELLS

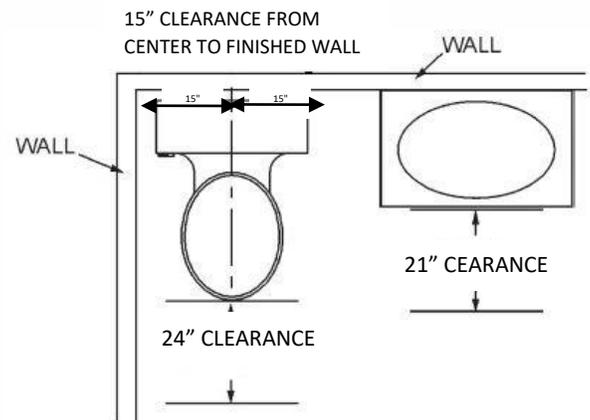
Each sleeping room must have one egress window or door. See Egress Escape Windows and Window Wells handout for details.

NATURAL LIGHT AND VENTILATION

Habitable rooms used for **sleeping** must be provided with natural light by means of exterior glazed openings (windows) with an area not less than 8% of the floor area. Natural ventilation shall be by window, door, louver or other approved openings to outside air.

FRAMING

Lumber must be grade-stamped. The bottom wall plate must be treated wood and securely fastened to the floor slab with nails/screws or construction adhesive. **Prior to framing inspection, rough-in inspections must be completed on any plumbing, heating, and electrical alterations or additions.** See Cutting and Notching section in this handout for details. Engineered floor trusses/beams must not be cut, notched, or altered without written approval from the manufacturer.



STAIRWAYS

Minimum stairway headroom clearance is 6 feet-8 inches (measured vertically from any plane parallel and tangent to the stairway tread nosing to the lowest point above).

Landings at the bottom of the stairways require 36" of depth before the door or wall.

ENCLOSED AREA UNDER STAIRS

If creating a closet under the stairway, all walls and ceilings must be protected with one layer of 1/2" gypsum board.

INSULATION

Refer to the MN State Energy Code. Insulation with a flame spread greater than 25 and/or a smoke density rating greater than 450 must be protected with 1/2" gypsum board.

Bathtub openings and other penetrations in the floor above must be filled with fiberglass or foam insulation (see plumbing section for more information on trap accesses.)

A vapor retarder with a perm rating of 1 or less is required on the warm side of the insulated exterior wood framed walls. This includes behind showers and tubs on exterior walls. Water resistive gypsum board cannot be applied over another vapor retarder.

DRAFT STOPPING

Draft stopping will be inspected with framing/insulation. See attached handout for details.

SAFETY GLAZING

Safety glazing is required in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathrooms and showers. Safety glazing must be used in any portion of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60" above the walking surface and less than 60" measured horizontally in a straight line from the water's edge.

Safety glazing is required in fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24" arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60" above the walking surface.

INSPECTIONS

Please call 763-767-6476 to schedule an inspection time.

The **approved plan** must be **on site for all** inspections.

Typically 4 inspections are required:

1. Framing –Prior to framing inspection, rough-in inspections must be completed on any plumbing, heating, and electrical alterations or additions. We will look at the following during the framing inspection:

1. Lumber to make sure that it is grade-stamped.
2. The bottom wall plate must be treated wood and securely fastened to the floor slab with nails/screws or construction adhesive.
3. See Cutting and Notching section in this handout for details. Engineered floor trusses/beams must not be cut, notched, or altered without written approval from the manufacturer.

2. Insulation/Vapor Retarder(Poly/Plastic) – We will look for the following during an insulation/vapor retarder inspection:

1. Insulation Rating. Minimum requirements are:
 - a. R-10 (recommended but not required for homes built prior to June 2009)
 - b. Rigid foam insulation with a flame spread greater than 25 and/or a smoke density rating greater than 450
 - c. The insulation must be protected with ½” gypsum board.
2. Bathtub openings and other penetrations in the floor above
 - a. filled with fiberglass or foam insulation (see plumbing section for more information on trap accesses.)
3. A vapor retarder (perm rating less than 1.0) is required on the warm side of the insulated exterior walls. This includes behind showers and tubs on exterior walls. Water resistive gypsum board cannot be applied over another vapor retarder or on ceilings.

3. Smoke/C.O. Alarms – This inspection is completed during the final inspection. (See separate Smoke/CO handout)

1. Smoke Alarm Requirements
 - a. Every Bedroom
 - b. Hallway in the vicinity of bedrooms
 - c. On every level
2. C.O. Alarms – Within 10 feet of every bedroom

4. Final Inspection – all other permits must have passed final inspection prior to scheduling the final building inspection.

1. Installation of gypsum on walls and ceiling of an under-the-stair closet.
2. Egress and tempered windows where required
 - a. Heights above the finished floor area
 - b. Egress window well ladder in place
3. Smoke/C.O. Alarms

WALL BOARD

Gypsum board (sheetrock) shall be installed as per attached requirements.

Gypsum Manual Sections are as follows:

Table 1			
Maximum Framing Spacing			
Single Ply Gypsum Board (Thickness)	Application to Framing	Maximum O.C. Spacing of Framing	
Inches	Direction	Inches	
Ceilings:	1/2	Perpendicular	16
	1/2	*Parallel	16
	5/8	Parallel	24
5/8"	1/2	*Perpendicular	24
	5/8	Perpendicular	24
Sidewalls:	3/8	Perpendicular or Parallel	16
	1/2	Perpendicular or Parallel	24
	5/8	Perpendicular or Parallel	24

*On ceilings to receive a water base texture material, either hand or spray applied, install gypsum board perpendicular to framing and increase board thickness from 3/8" to 1/2" for 16" o.c. framing and from 1/2" to 5/8" for 24" o.c. framing.

Double Nailing

5.2.4 Edge joints PARALLEL to framing member should be staggered on each side of the assembly.

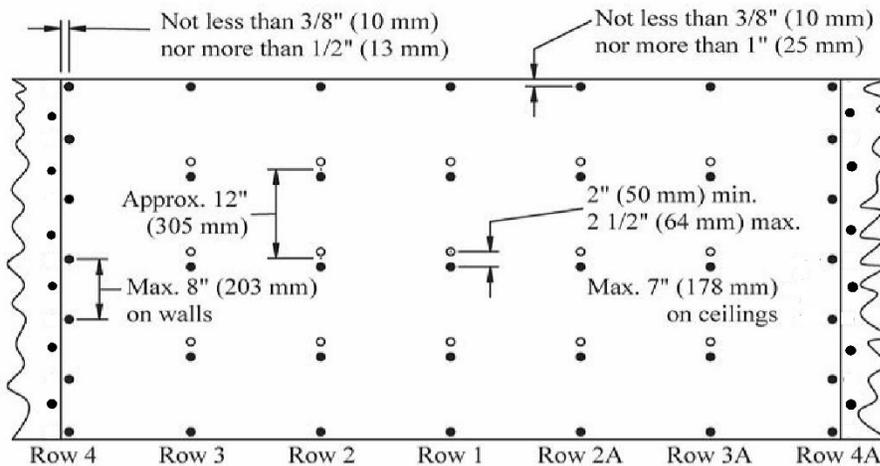


Table 2	
Nailing Schedule for Single Ply Gypsum Board	
Gypsum Board Thickness	Minimum Nail Length
<u>Inches</u>	<u>Inches</u>
1/2	1-3/8
5/8	1-1/2

5.3.3 When screws are used in lieu of nails, they should penetrate framing not less than 5/8" and be spaced a maximum of 12" o.c. for ceilings and 16" o.c. for walls where the framing members are 16" o.c. Screws should be spaced a maximum of 12" o.c. for ceilings and walls where framing members are 24" o.c.

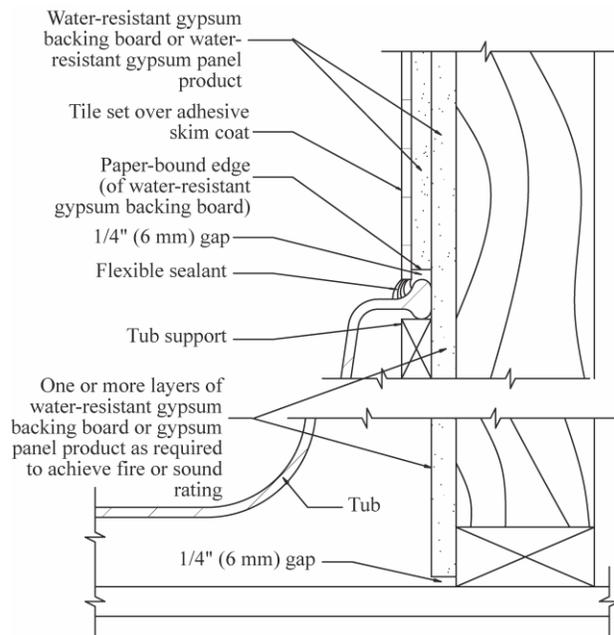
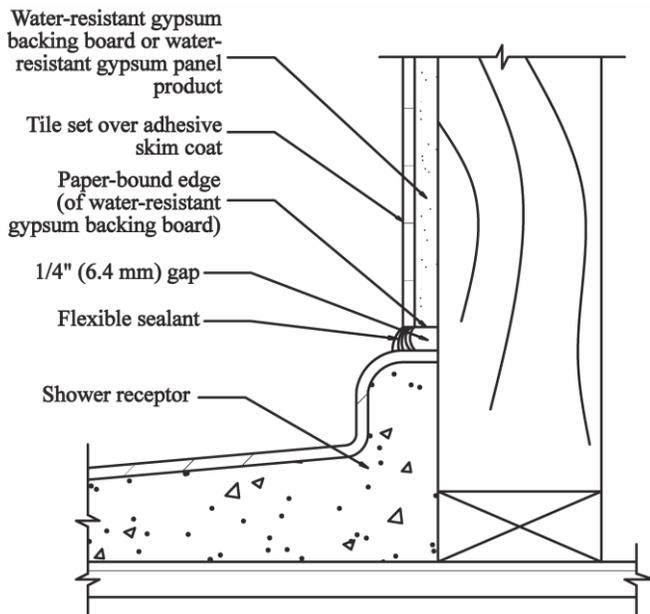
5.3.4 A combination of fasteners consisting of nails along the perimeter and screws in the field of the gypsum board may be used.

Application of Gypsum Board to Receive Adhesively Applied Ceramic or Plastic Wall Tile of Plastic Finished Wall Panels

- Framing around tub enclosures and shower stalls should allow sufficient room so that inside lip of tub, prefabricated receptor or hot-mopped sub-pan will be properly aligned with face of gypsum board. (See illustrations below) This may necessitate furring out from studs the thickness of gypsum board to be used $\frac{1}{2}$ " or $\frac{5}{8}$ " less thickness of the lip, on each wall abutting a tub, receptor, or sub-pan. Interior angles should be framed or blocked to provide solid backing for interior corners.
- When framing is spaced more than 16" o.c, suitable blocking or backing should be located approximately 1" above top of tub or receptor and at gypsum board horizontal joints in area to receive tile. When surface finish is ceramic tile, spacing of studs 2-1/2" thick or less should not exceed 16" o.c. Studs 3-1/2" or more in thickness may be spaced 24" o.c. provided blocking described above is utilized.

Note: Appropriate blocking, headers or supports should be provided to support tub.

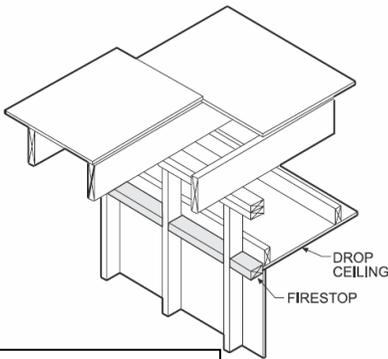
- Water resistant gypsum backing board or cement backer units may be used as a base for application of ceramic or plastic wall tile or plastic finished wall panels in wet areas such as tub and shower enclosures. Regular gypsum board should not be used in extremely critical exposure areas such as saunas, steam rooms or gang shower rooms. Gypsum board used as a base for tile or wall panels in tub or shower enclosures, etc., should not be foil backed and shall not be applied over any vapor retarder.



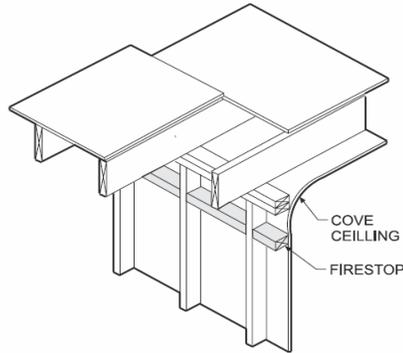
FIRE BLOCKS AT SOFFITS

Section R302.11

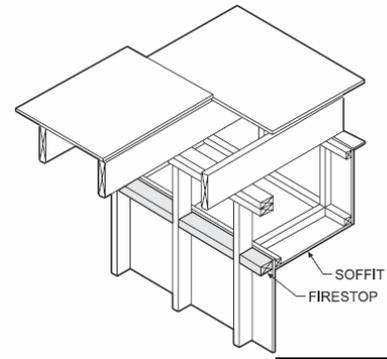
At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.



FIRESTOPPING - DROP CEILING



FIRESTOPPING - COVE CEILING

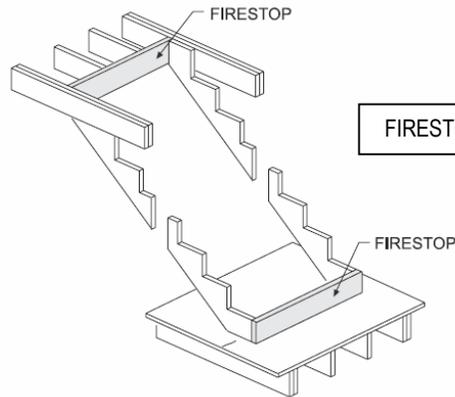


FIRESTOPPING - FURRED SOFFIT

FIRE BLOCKS IN CONCEALED SPACES AT STAIRS

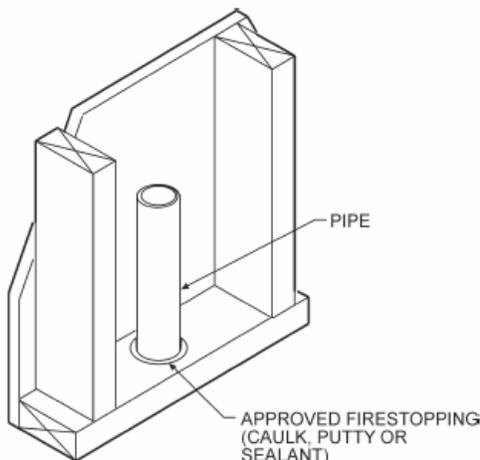
IRC Section R302.11

In concealed spaces between stair stringers at the top and bottom of the run and between studs along and in line with the run of stairs if the walls under the stairs are unfinished.

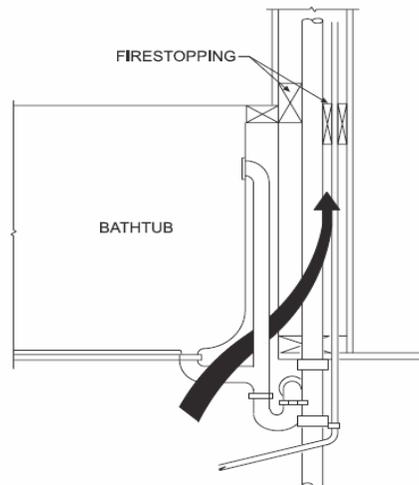


FIRESTOPPING - AT STAIRWAY

FIRE BLOCKS AT OPENINGS



FIRESTOPPING - AROUND PIPING



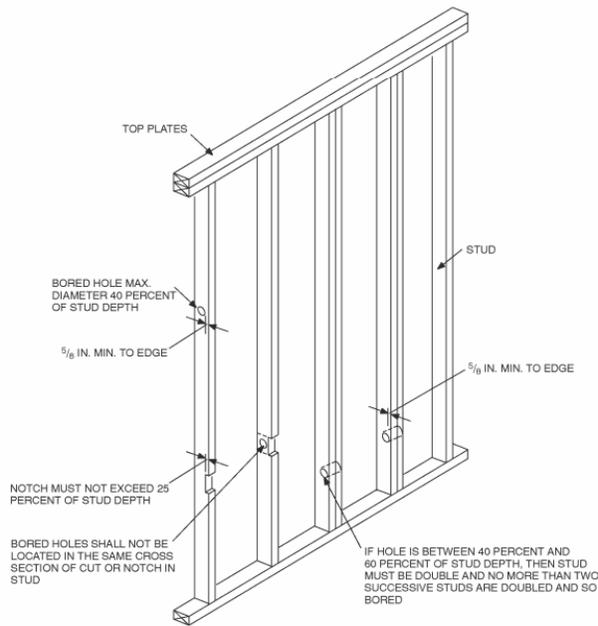
FIRESTOPPING - AT TUB

CUTTING AND NOTCHING

IRC Section 602 Cutting and Notching. In exterior walls and bearing partitions, any wood stud may be cut or notched to a depth not exceeding 25% of its width. Cutting or notching of studs to a depth not greater than 40% of the width of the stud is permitted in nonbearing partitions supporting no loads other than the weight of the partition.

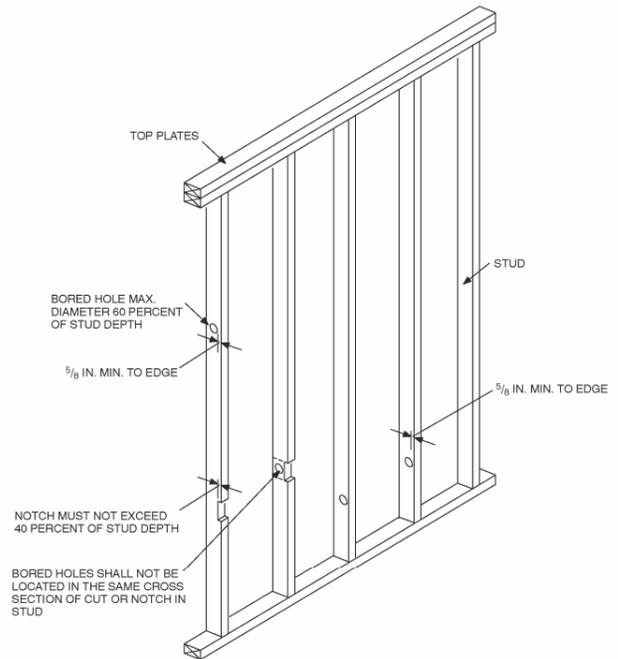
IRC Section 602. Bored Holds. Bored holes not greater than 60% of the width of the stud is permitted in nonbearing partitions or in any wall where each bored stud is doubled, provided not more than two such successive doubled studs are so bored.

In no case shall the edge of the bored hold be nearer than 5/8 inch to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.



For SI: 1 inch = 25.4 mm.
Note: Condition for exterior and bearing walls.

FIGURE R602.6(1)
NOTCHING AND BORED HOLE LIMITATIONS FOR EXTERIOR WALLS AND BEARING WALLS



or SI: 1 inch = 25.4 mm.

FIGURE R602.6(2)
NOTCHING AND BORED HOLE LIMITATIONS FOR INTERIOR NONBEARING WALLS