

Basement Finishing

This handout is intended only as a guide and is based in part on the 2020 Minnesota Residential Code, Isanti City ordinances, and good building practice. While every attempt has been made to ensure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the owner or contractor. For specific questions regarding code requirements, refer to the applicable codes or contact the Isanti Building Department.

PERMITS AND PLANS

Building permits are required if you are finishing unfinished space in your basement, changing the use of space such as converting a recreation room to a bedroom, and for some repairs. If you hire someone to do the work for you, it is advised that they apply for the required permits. Plans are required for any finishing or change of use. Plans should be neat, legible, scale drawings that include a floor plan (*example on last page*), window sizes and locations, cross sections for detailed framing, and any notes that would help explain the nature and extent of your project. Once submitted, it takes on average **2-5 working days** before your permit will be ready so please submit your plans and permit application well



in advance of the date when work will begin. **Inspections are required** of all work. With the approved permit you will receive an inspection record card that will tell you which inspections to call for and the number to call. Inspections are made by appointment. **Requests for inspections should be made at least 24 hours** in advance. If you have any questions on the permitting process or requirements, please contact the Building Department.

REQUIRED PERMITS

- Building Permit for framing and finish work, setting of plumbing fixtures and supply/return ducts. This is an all-inclusive permit except for electrical and new plumbing/mechanical installations.
- Electrical Permit for receptacles, lights, electric floor heat, etc.
- Plumbing Permit for any non-roughed-in plumbing of bathrooms, hot tubs, wet bars, etc.
- Mechanical Permit for gas piping if installing a gas fireplace.

EMERGENCY ESCAPE AND RESCUE OPENINGS

Basements, habitable attics, and every sleeping room shall have at least one operable emergency escape and rescue opening unless the dwelling has a fire sprinkler system. If no bedrooms are installed, 1 means of egress (window or door) still needs to be made available as an emergency escape and rescue opening from each level of the dwelling.

GENERAL INFORMATION

- A homeowner may apply for a permit and do their own work, or a contractor may apply for the permit(s). All contractors must be insured and/or licensed, and show proof as such to obtain a permit. Specific questions regarding contractors should be directed to the Minnesota Department of Labor and Industry.
- Habitable space, hallways, bathrooms, toilet rooms, laundry rooms, and portions of basements containing these spaces shall have a ceiling height not less than 7'. Alterations to existing basements or portions thereof shall have a ceiling height of not less 6' 4" including beams, girders, ducts, or other obstructions.
- Bathrooms must be provided with ventilation via an operable window with at least 1.5 square feet of open area, a mechanical exhaust fan with a minimum rating of 50 cfm, or mechanically vented to the home HRV/ERV system. Rigid metal duct creates less air flow resistance and will improve the efficiency of your bath fan.
- Toilets must be installed in a space at least 30 inches wide and at least 24 inches of clear space must be provided in front of the toilet.
- Showers shall have a clear space within the stall of at least 30 inches.
- Fireplaces and stoves may be installed in basements but must be installed in strict accordance with the manufacturer's instructions. Dedicated combustion air is required for all solid fuel burning appliances (wood stoves).
- Bedrooms must be at least 70 square feet in area.
- Nail plates should be installed wherever nails or screws may come in contact with electrical wiring, plumbing, or gas piping.

GENERAL FRAMING REQUIREMENTS

For most typical sheetrock construction, non-bearing wood framed walls may be 2x4 studs at 16 or 24" on center. Wood veneer paneling may be placed on wood framing spaced not more than 16" on center. Wood veneer paneling less than 1/4" nominal thickness may have not less than a 3/8" gypsum board backer. Walls must have a bottom plate and at least a single top plate. For older homes it is advised that bottom plates in contact with concrete floors be treated or naturally durable. For stud size and spacing for bearing walls, contact the Building Department. Wood used for framing soffits may be 2x2 materials. Headers in non-bearing walls may consist of a 2x4 laid flat for openings up to 8 feet wide. No cripples



or blocking are required above the header provided the distance from the header to the floor joist above is not more than 24". For sizing requirements of headers in bearing walls, contact the Building Department. Do not remove any existing partitions unless you have determined that they are not load bearing partitions. If any portion of a load bearing partition is removed, a header or beam must be installed to transfer the load to a footing. Treated wood furring strips not less than 1x2" may be attached directly to the interior of exterior masonry or concrete walls below grade. Untreated furring strips may be used if an approved vapor retarder is installed between the wall and the furring strips, but fasteners may not penetrate the vapor retarder.

DRILLING AND NOTCHING OF FLOOR FRAMING MEMBERS

Structural floor members of solid sawn materials shall not be cut, bored, or notched in excess of the limitations specified in the 2020 MN Residential Code.

Cuts, notches, and holes bored in trusses, structural composite lumber, structural glue-laminated members or I-joists are prohibited except where permitted by the manufacturer's recommendations or registered design professional. You should obtain a copy of these instructions before starting any work.

FIREBLOCKING & DRAFTSTOPPING

Fireblocking in residential wood frame construction helps resist the free passage of flame in concealed spaces of a building. Fireblocking most commonly used includes: 2x lumber, two thicknesses of 1x lumber, ¾" plywood or particleboard with joints backed with same material, ½" gypsum board, or batts/blankets of mineral wool or fiberglass insulation. Fireblocking will be inspected as part of the framing or insulation inspection. There are also a number of approved caulks and foams available at local building supply stores that are approved for fireblocking small areas. Be sure the caulk or foam that you buy is labeled as non-combustible.

Draftstopping in residential wood frame construction creates a smoke & fire barrier in concealed floor/ceiling assemblies. Draftstops must be installed in any concealed space over 1,000 square feet if there is usable space above and below, and the ceiling is either suspended or the floor framing is truss-type open-web or perforated members. The most commonly used draftstopping materials are 1/2" gypsum board or 3/8" wood structural panel. The draftstopping must divide the concealed space into approximate equal areas.

INSULATION

The Minnesota Energy Code does not require basement foundation walls and crawl spaces of existing homes to be insulated *if the permit for the dwelling was issued before June 1, 2009*. The method and type of insulation you use is entirely up to you. If you use foam plastic insulation, it must be covered with ½ - inch gypsum board unless the foam plastic is approved for use without the covering.

CARBON MONOXIDE AND SMOKE ALARMS

Carbon monoxide alarms must be installed outside of, and not more than ten feet from the vicinity of sleeping rooms. At least 1 is required **on each floor containing sleeping rooms**. Smoke alarms shall be located: **1 in each bedroom, and at least 1 on each floor** of the dwelling including the basement and habitable attics. Alarms must be installed in accordance with the manufacturers written instructions. Where framing is exposed, alarms may be hard wired with a battery backup and must be interconnected with other hardwired alarms. When framing is not exposed or it is not feasible to hardwire a smoke alarm, battery powered detectors may be used.



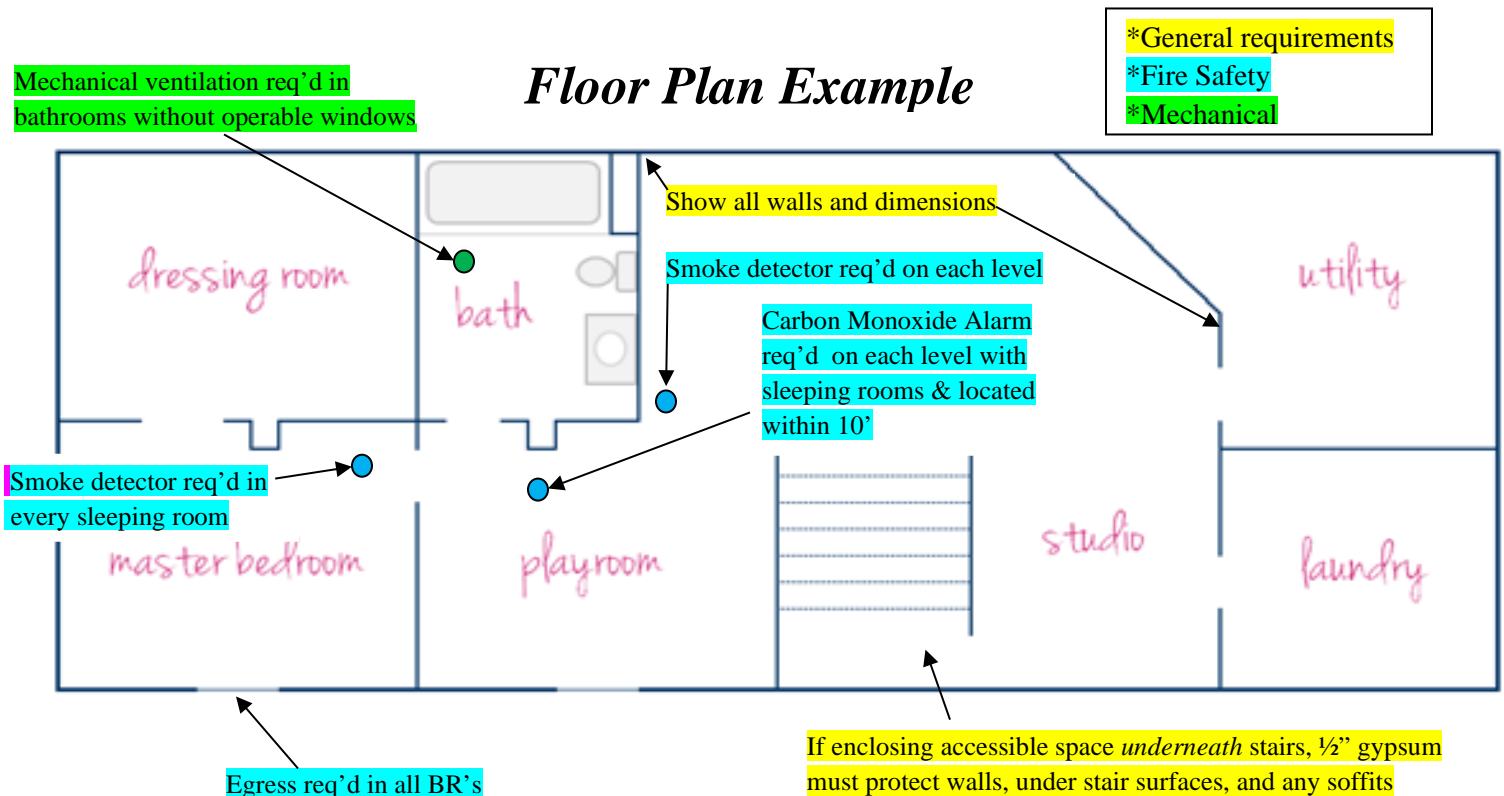
COMBUSTION AIR FOR FURNACES AND WATER HEATERS

If you are enclosing the space housing your furnace and/or water heater, you may need to provide additional combustion air. If your mechanical room is adjoined and has open access to the garage, all ignition sources must be located a min. 18" off of the floor. If you have any questions regarding the issue of combustion air, please contact the Building Department.

ELECTRICAL, PLUMBING, AND HEATING INSTALLATIONS

A flat fee basement finish permit was established by Isanti ordinance, this permit includes water piping and setting of fixtures to basement bathroom areas that were roughed-in when the home was built as well as the required HVAC vents and ducts. All electrical requires a separate permit and plumbing, and mechanical work outside the roughed-in areas are subject to permits and inspections. If you hire someone to do electrical, plumbing, or mechanical work, it is advised to have them apply for the permit(s).

Floor Plan Example



-----Tips for consideration-----

NOW IS THE TIME!!!!

Prior to finishing any basement space, it is advisable to consider addressing any deferred maintenance items prior to the start of work. This might include damp proofing walls, patching any cracks in concrete or masonry walls and concrete floors, and repairing any joists or studs that have been over-bored or cut without being properly supported. If you have considered installing drain tile and a sump pump, now would be the time to do that as well.