

INSPECTION SERVICES OF CENTRAL MINNESOTA, INC.



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Building Permit Requirements New Construction

REQUIRED INFORMATION WHEN APPLYING FOR A BUILDING PERMIT

1. Energy Code Compliance:

- Energy Code Certificate of Compliance from the Builder. The Minnesota Energy Code requires the builder to provide an energy compliance certificate that shall remain permanent with the dwelling. The new Minnesota Energy Code can be found at <http://codes.iccsafe.org/app/book/toc/2015/Minnesota/2015%20Minnesota%20Energy%20Code%20with%20ASHRAE/index.html>
- **R403.6 Equipment Sizing (Mandatory).**
Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other *approved* heating and cooling calculation methodologies.
- **R403.5 Mechanical ventilation (mandatory).**
The building shall be provided with a balanced mechanical ventilation system that is +/-10 percent of the system's design capacity and meets the requirements of table R403.5.2 and Section R403.5.5, which establishes the continuous and total mechanical ventilation requirements for dwelling unit ventilation.
- **R403.5.17 Climatic design conditions.**
 - A. HVAC equipment shall be sized according to the ACCA Manual S or an equivalent method, based on the building's heating and cooling load calculations by using ASHRAE *Handbook of Fundamentals* or the ACCA Manual J. Oversizing of heating equipment shall not exceed 40 percent of the calculated load requirements and oversizing of cooling equipment shall not exceed 15 percent of the calculated load requirements.
 - B. Design conditions shall be determined according to Table 403.5.17. Design condition adjustments may be determined by the building official if local climates differ from the tabulated temperatures based on local climate data.
- Mechanical plans with *ventilation air, make up air* and *combustion air* needs. (Please provide a copy of the calculations to the building official and enter on certificate of compliance before work begins.)
 1. Complete the HVAC handout including Make Up Air worksheet and Combustion Air worksheet.

2. Please provide design for Radon control method required in all new homes. Information can be found at <https://www.revisor.leg.state.mn.us/rules/?id=1303.2402>

3. Submit 2 copies of drawings showing proposed designs and materials. Drawings shall be drawn to ¼ scale and shall include the following information:

- Floor plan(s) including:
 - Proposed size
 - Size and spacing of floor joists
 - Size, location and spacing of posts
 - Size of headers/beams
 - Size and spacing of roof supports
 - Smoke detector locations: Minnesota Residential Code R314
 - Egress windows: Minnesota Residential Code R310
 - Bathroom and Mechanical room layouts
 - Window schedule with U values and fall prevention

- Cross section of either side or rear view including:

Diameter and depth of footings	Ceiling height
Foundation type and size	Type of sheathing, house wrap and siding
Water Proofing	Header size and spacing of rafter material
Header size supporting floor joists	Type of roof covering
Floor joist size and spacing	Pitch of roof
Guardrail height and spindle spacing	Radon Design
Stair and handrail detail	Pan flashing detail
Wall and Attic Insulation	Drain tile and sump basket

- Elevations which show what proposed structure will look like on all sides

BUILDING CODE REQUIREMENTS

1. Footing depth for structures in Zone I is minimum 60” (five foot depth) below grade. Structures in Zone II is 42” (three feet six inches) minimum below grade, See map at www.dli.mn.gov/ccld/pdf/bc_map_frost_depth.pdf.
2. Roof snow load in Zone I is 42 psf and 60 psf ground snow load and Zone II is 35 psf snow load and 50 psf ground snow load. See map at www.dli.mn.gov/ccld/pdf/bc_map_snowload.pdf.
3. A 6 mil poly shall be installed under basement concrete slabs, if soils are a clay soil, 4” of rock shall be placed under the poly for proper drainage.
4. Individual concrete or masonry piers shall project at least 8” above exposed ground unless the columns or posts which they support are of redwood, cedar or approved treated material.
5. Wood joists 18” or closer to grade, or wood beams 12” or closer to grade and their supports shall be redwood, cedar or approved treated material.
6. Redwood, cedar or approved treated material shall be used for those portions of wood members which form the structural supports of buildings, balconies, porches or similar permanent building appurtenances when such members are exposed to weather without adequate protection from a roof, eave, overhang, or other covering to prevent moisture or water accumulation on the surface or at joints between members. Depending on local experience, such members may include: horizontal members

such as girders, joists, and decking; or vertical members such as posts, poles, and columns; or both horizontal and vertical members. (Stairways are included)

7. Guardrails, minimum 36 inches high, are required on all porches, balconies, ramps or raised floor surfaces more than 30 inches above grade or a lower deck. Guardrails on open sides of stairs, with total rise more than 30 inches above floor or grade below, shall have guards not less than 34 inches in height measured vertically from the nosing of the treads. All guards shall have intermediate rails or ornamental closures which do not allow passage of a 4 inch sphere. Open risers are permitted, provided the opening between treads does not allow the passage of a 4 inch sphere.

Exceptions:

1. The triangle openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway shall not allow a 6 inch sphere to pass through.
2. Openings for the required guards on the sides of stair treads shall not allow a 4 $\frac{3}{8}$ inch sphere to pass through.

8. All stairways shall be a minimum of 36" in width; the rise shall be 7 $\frac{3}{4}$ inch maximum and have a minimum of 10 inch run. The largest stair rise and tread run may not exceed the smallest stair rise or tread run by more than $\frac{3}{8}$ inch. All interior and exterior stairs shall also be provided with a means to illumination, including the landings and treads. Exterior stairways shall be provided with a light source located in the immediate vicinity of the top landing of the stairway. Interior activation of the stairway lighting shall be accessible at each floor level where the stairway has six or more risers. The illumination of exterior stairs shall be controlled from inside the dwelling unit.
9. A handrail shall be provided to all stairways having four or more risers. Handrails shall be placed not less than 34" or more than 38" above the nosing of treads. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails projecting from a wall shall have a space of not less the 1 $\frac{1}{2}$ " between the wall and the handrail. The handrail grip with a circular cross section shall have an outside diameter not less than 1 $\frac{1}{4}$ " and not more than 2".

Required Inspections

Note: The "approved" plans and the Inspection Record Card shall be made available to the inspectors during inspections. The Building Permit is to be posted in a prominent location visible from the street.

1. (Footing and Setback) this inspection will be performed when all form work and rebar reinforcement is installed and ready for the installation of concrete. Approval shall be given if footings and setback is correct, after which the concrete can be poured.
2. (Foundation) this will be done before backfill when the water proofing, exterior insulation, core fill, rebar reinforcement of the blocks and bracing of the foundation.
3. (Rim Joist) when the foam is installed and sealed.
4. (House Wrap) when the windows and house wrap and taping of the windows are complete or at the time of siding. All windows and doors require pan flashing (Minnesota Building Code R703.8.1).
5. (Framing) when the plumbing, heating, gassing and electrical rough-in inspections are complete and all framing components are installed.

6. (Insulation) when all the insulation, poly and sealants are installed.
7. (Final) when all final inspections are complete and final grade and septic are installed and the structure is complete and ready for occupancy.

Additional permits and inspections shall be required:

1. (Plumbing Permit) Rough-in plumbing and 5psi air test, Final plumbing with a monometer test.
2. (Heating, Ventilation and air conditioning Permit) Rough-in HVAC visual, Final HVAC
3. (Gassing Permit) Rough-in air test if line is covered or brazed, Final gas inspection with manometer test on the gas line and appliances.