MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY

Department of Labor and Industry
Construction Codes and Licensing Division
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St. Paul, MN 55155
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The State of Minnesota adopts a set of construction standards known as the Minnesota State Building Codes (MSBC). The MSBC contains safety requirements relating to structure, mechanical, plumbing, energy, electrical, elevators, manufactured buildings and life safety.

The information in this brochure is for general reference for residential construction projects. Contact your municipal building official regarding permits and specific code requirements for residential construction within your community.

To confirm if your contractor is licensed in Minnesota contact the:

Department of Labor and Industry
Residential Building Contractors
Phone: (651) 284-5065 or 1-800-657-3944
www.doli.stage.state.mn.us/contractor.html
E-mail: DLI.Contractor@state.mn.us

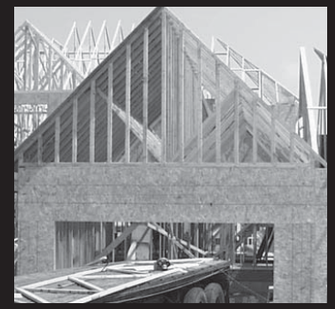
www.doli.state.mn.us
www.mncodes.org

GI012 1-07

Gopher State One Call
Call at least two full business days before you dig.
Phone: (651) 454-0002 or 1-800-252-1166
www.gopherstateonecall.org

GARAGES

Guidelines for planning the construction of a garage.



Permits

Building permits are required for construction of all garages. The Minnesota State Building Code (MSBC) differentiates between attached and detached garages and there are some differences in the requirements. Garages must also meet the land use and setback requirements of the city zoning code. Zoning questions should be directed to the local planning and zoning department.

Permit fees, plan review and inspections

Building fees are established by the municipality. Inspections are performed at various stages of construction to verify code compliance. The plan review is done by the building official in order to spot potential problems or pitfalls that may arise. The building official may make notes on the plan for your use. Inspections are performed at various stages of construction to verify code compliance. Actual permit costs can be obtained by calling your local building inspection department with your estimated construction value.

Note: Setbacks from property lines vary depending upon the city and zoning district your home is located in. Some communities have other zoning provisions that may include lot coverage or screening.

Required inspections

a. Footing or concrete slab

To be made after all form work is set and any required reinforcement is in place **but prior to the pouring of the concrete**.

b. Framing

To be made after framing is complete and other required rough-in inspections are completed and approved.

c. Final

To be made upon completion.

d. Other inspections

In addition to the inspections above, the inspector may make or require other inspections to ascertain compliance with the provisions of the code or to assist you with your questions or concerns during the construction process.

Construction Codes and Licensing

General building code requirements

a. **Footings: Footings** must extend to frost depth for all attached garages. A "floating slab" may be used for the foundation support of detached garages on all soils except peat and muck. Slab perimeter must be sized and/or reinforced to carry all design loads. The minimum-slab thickness must be 3 1/2 inches and reinforcing is recommended. The minimum concrete strength required is 3500-pounds-per-square-inch for floating slab. Protect concrete from freezing until cured.

b. **Anchor bolts or straps:** Foundation plates must be anchored to the foundation with not less than 1/2 inch diameter steel bolts, or approved straps, embedded at least seven inches into the concrete and spaced not more than six feet apart. There must be a minimum of two bolts per piece of sill plate with one bolt located within 12 inches of each end of each piece of sill plate. Anchor straps must be installed per the manufacturer.

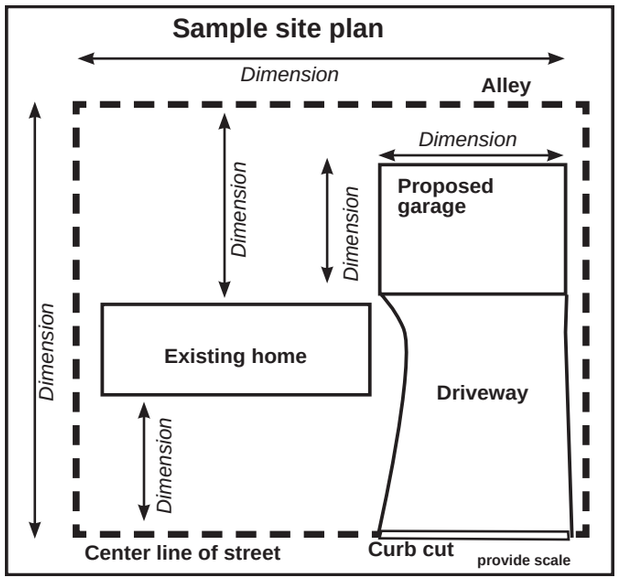
c. **Sill plate:** All foundation plates on sills and sleepers on a concrete or masonry slab, which is in direct contact with earth and sills which rest on concrete or masonry foundations must be of approved treated wood, heartwood of redwood, black locust or cedars having a width not less than that of the wall studs.

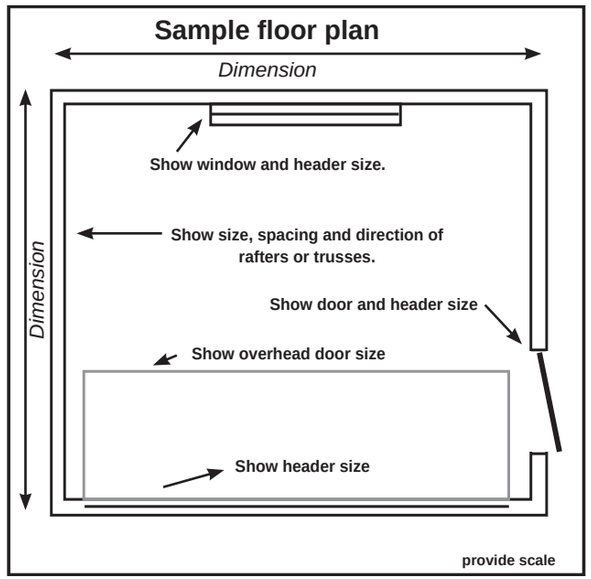
Plans: Site, floor and elevation

The following samples show the minimum detail expected to ensure the permit process proceeds smoothly. Additional information, such as sectional drawing or elevations, may be required.

Plan should include the following information:

1. Proposed size of garage.
2. Location and size of door and window opening.
3. Size of headers over all doors and window openings.
4. Size, spacing and direction of rafter (roof) materials.
5. Type (grade and specie) of lumber to be used.
6. Braced wall panels per IRC section R 602.10.





d. **Wall framing:** Studs must be placed with their wide dimension perpendicular to the wall and not less than three studs must be installed at each corner of an exterior wall. Minimum stud size is two inches by four inches and spaced not more than 24 inches on center.

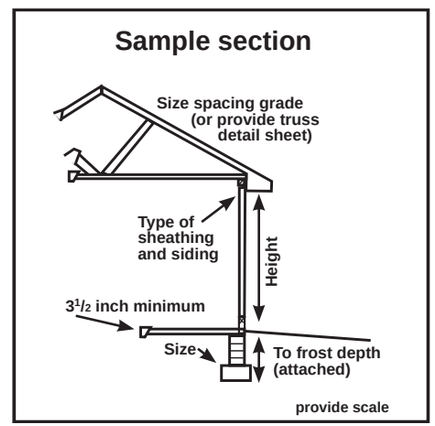
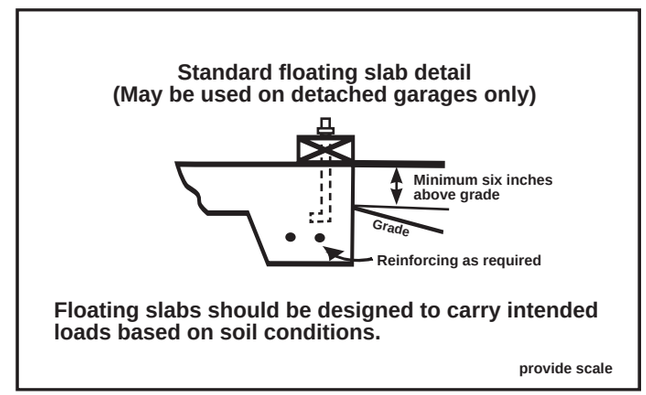
e. **Top plate:** Bearing and exterior wall studs need to be capped with double-top plates installed to provide overlapping at corners and at intersections with other partitions. End joints in double-top plates must be offset at least 24 inches.

f. **Sheathing, roofing and siding:** Approved wall sheathing, siding, roof sheathing and roof covering must be installed according to the manufacturers specifications. Wall sheathing may be required to have a weather-resistive barrier installed over the product prior to application of the siding product.

g. **Wood and earth separation:** Wood used in construction located nearer than 6 inches to earth shall be treated wood.

h. **Roof framing:** Size and spacing of conventional lumber used for roof framing depends upon the roof pitch, span, the type of material being used and the loading characteristics being imposed. Garages must be designed for the appropriate snow load in your area. Contact your local building inspector. A snowload map is online at www.doli.state.mn.us/bc_residential.html.

Rafters need to be framed directly opposite each other at the ridge. A ridge board at least one inch (nominal) thickness and not less in depth than the cut end of the rafter is required for hand-framed roofs. At all valleys and hips, there also needs to be a single valley or hip rafter not less than two inches (nominal) thickness and not less in depth than the cut of the rafter. Valley needs to be designed as a beam.

Rafters must be nailed to the adjacent ceiling joist to form a continuous tie between exterior walls when the joists are parallel to the rafters. Where not parallel, rafters must be tied by a minimum one inch by four inch (nominal) cross tie spaced a maximum four foot on center. Manufactured trusses are to be installed per the manufacturer.

i. **Separation required:** An attached garage shall be separated from the residence and its attic area by not less than 1/2 inch (12.7 mm) gypsum board applied on the garage side. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than 1/2 inch (12.7 mm) gypsum board or equivalent.