GARAGES

GUIDELINES FOR PLANNING THE CONSTRUCTION OF A GARAGE

Minnesota Department of Labor and Industry

PERMITS

Building permits are required for construction of all garages. The 2015 Minnesota Residential Code 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 city zoning code. Zoning questions for setbacks from property lines should be directed to the local planning and zoning department.

MUNICIPAL PERMIT FEES, PLAN REVIEW AND INSPECTIONS

Building permit fees are established by the municipality. Inspections are performed at various stages of construction to verify code compliance. A plan review is completed by the building official to spot potential problems. The building official may make notes about the plan for your use.

Permit costs can be obtained by calling your local building inspection department with the project's estimated construction value.

REQUIRED INSPECTIONS

- **Footing or concrete slab:** Inspected after all form-work is set and any required reinforcement is in place but before the concrete is poured.
- **Framing:** Inspected after framing is done and required rough-in inspections are finished and approved.
- **Final:** The project is inspected upon completion.
- **Other:** The inspector may require or suggest other inspections to ensure code compliance or to assist with any questions.

GENERAL BUILDING CODE REQUIREMENTS

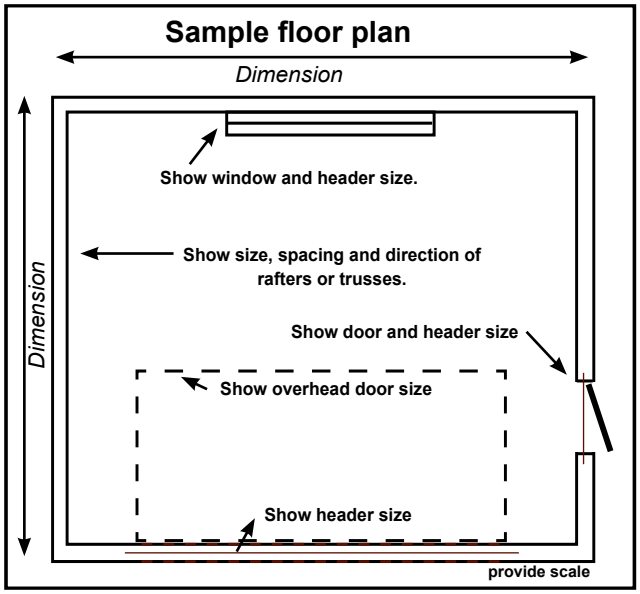
The 2015 Minnesota Residential Code adopts the 2012 International Residential Code (2012 IRC).

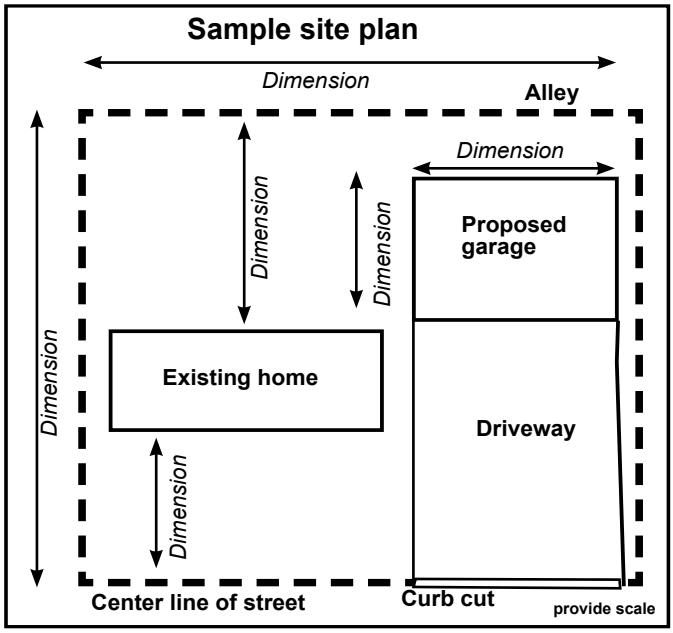
- **Footings:** Footings must extend to frost depth for all attached garages. A "floating slab" may be used for the foundation support of detached garages on all soils except peat and muck. The slab perimeter must be sized and/or reinforced to carry all design loads. The minimum-slab thickness must be 3 1/2 inches and reinforcing is recommended. The minimum concrete strength is 3500-pounds-per-square-inch for floating slab. Protect concrete from freezing until cured.
- **Anchor bolts or straps:** Foundation sill (sole) 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 for each 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 according to manufacturer's specifications.
- **Sill (sole) plate:** All foundation sill plates must be approved pressure-preservative-treated wood, heartwood of redwood, black locust or cedar.
- **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.
- **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.
- **Sheathing, roofing and siding:** Approved wall sheathing, siding, roof sheathing and roof covering must be installed according to the manufacturer's specifications. A water-resistive barrier over the wall sheathing may be required prior to application of the siding product.

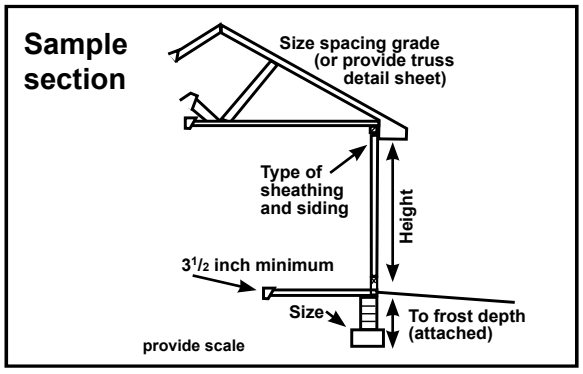
EXAMPLES

The following samples show the minimum detail expected on site, floor and elevation plans. Additional information, such as sectional drawing or elevations, may be required. The plans should include:

1. Proposed size of garage.
2. Location and size of door and window opening.
3. Size of headers over all doors and window openings.





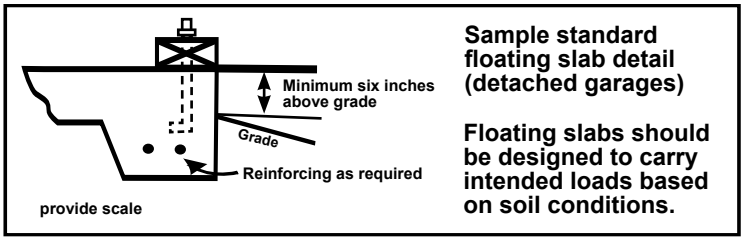


CODE REQUIREMENTS (CONTINUED)

- **Wood and earth separation:** Wood used in construction located nearer than 6 inches to earth must be treated wood.
- **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 snow load map is at www.dli.mn.gov/sites/default/files/pdf/bc_map_snowload.pdf.

  Rafters need to be framed directly opposite each other at the ridge. Hand-framed roofs must have a ridge board at least one inch (nominal) thickness and not less in depth than the cut end of the rafter. 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. Manufactured trusses are to be installed following the manufacturer's instructions.
- **Separation required:** An attached garage must 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 must be protected by not less than 5/8-inch (15.9 mm) type "X" gypsum board or equivalent.
- **Concrete curb block:** Concrete masonry curb blocks must be at least 6-inch-modular width (4-inch-curb blocks are not permitted by code).



DEPARTMENT OF LABOR AND INDUSTRY

Construction Codes and Licensing Division
www.dli.mn.gov
Phone: (651) 284-5012 or 1-800-657-3944

This flier is an overview of guidelines for planning the construction of a garage and can be provided in different forms, such as large print, Braille or audio.