



## 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) 284-5069 or 1-800-657-3944  
[www.doli.state.mn.us/contractor.html](http://www.doli.state.mn.us/contractor.html)  
E-mail: [DLI.Contractor@state.mn.us](mailto:DLI.Contractor@state.mn.us)

[www.doli.state.mn.us](http://www.doli.state.mn.us)  
[www.mncodes.org](http://www.mncodes.org)

05-07



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[www.call811.com](http://www.call811.com)



# DECKS

*Guidelines for planning  
the construction  
of a deck.*



## Permits

Building permits are required for all decks that are attached to the home or are 30 inches or more above grade. Decks and platforms not more than 30 inches above adjacent grade and not attached to a structure with frost footings, do not require a building permit and may require a zoning or land-use permit.

Decks and platforms are required to meet the land-use requirements of the community's zoning code. An important first step is to contact the local planning and zoning department with questions.

### A municipality may require permit fees, plan reviews and inspections

Permit fees are established by the municipality. 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.

Your building inspector will need:

1. An application for permit.
2. A site plan or survey.
3. A deck plan with all applicable structural details.

## Required inspections

- 1. Footings:** After the holes are dug, **but prior to pouring of concrete!**
- 2. Framing:** To be made after framing is completed. This inspection can be completed at the time of the final inspection if all parts of the framing will be visible and accessible with prior approval of the building official.
- 3. Final:** Is done after completion.

Setbacks from property lines vary depending upon the city and zoning district your home is located in. Contact the building department in your community for the requirements in your location. This is an important first step in the planning for any deck project.

## Notice regarding pressure-treated wood

When a pressure-preservative-treated wood is used, it must comply with the American Wood Preservers Association UI Standard based on exposure (exterior) and use (above ground or ground contact). The lumber must bear the quality mark (stamp or end tag) of an approved inspection agency. Designers, builders and home owners need to verify that proper hardware (hangers, nails, brackets) are appropriate with the particular treatment of the lumber. This not only applies to decks utilizing these products, but sill plates and posts as well. Additional information is available online at [www.doli.state.mn.us/bc\\_residential.html](http://www.doli.state.mn.us/bc_residential.html).

## General building code requirements

The 2007 Minnesota State Building Code adopts the 2006 International Residential Code (2006 IRC). All "R" code references provided in this brochure pertain to the 2006 IRC.

- a. Footings must extend to frost depth (if attached to the house).
- b. Decks need to be designed for a 40-pound-per-square-foot live load and balconies to a 60-pound-per-square-foot live load. Decks exposed to the weather must be constructed of approved wood with natural resistance to decay such as redwood, cedar or treated wood. Ledger boards must be bolted or lagged to the building and all connections between the deck and dwelling must be flashed. Before using alternative building products, check with your local building official.



- c. Columns and posts in contact with the ground or embedded in concrete, earth or masonry must be of pressure-treated wood approved for ground contact.
- d. Cedar or redwood posts need an 8-inch separation from the ground.
- e. All decks, balconies or porches, open sides of landings and stairs that are more than 30 inches above grade or a floor below must be protected by a guard not less than 36 inches in height. Grade is measured at edge of structure. 2006 IRC guard opening limitations states required guard on open sides of stairways, raised floor areas, balconies and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches (102mm) or more in diameter. Exceptions: 1. The triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway are permitted to be of such a size that a sphere 6 inches (152 mm) cannot pass through. 2. Openings for required guards on the sides of stair treads shall not allow a sphere 4<sup>3</sup>/<sub>8</sub> inches (107 mm) to pass through (R312.2).
- f. If a stairway is to be provided, it must be no less than 36 inches in width. Stairways may be constructed having an 7<sup>3</sup>/<sub>4</sub>-inch-maximum rise (height) and a 10-inch-minimum run (length). The largest tread rise and tread run may not exceed the smallest corresponding tread rise or run by more than 3<sup>3</sup>/<sub>8</sub> inch. Stairway illumination is required by the code. Open risers are permitted, provided the opening between the treads does not permit the passage of a 4-inch-diameter sphere.
- g. Handrails are required on all stairways having four or more risers. All required handrails shall be of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1<sup>1</sup>/<sub>4</sub> inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6<sup>1</sup>/<sub>4</sub> inches (160 mm) with a maximum cross section of dimension of 2<sup>1</sup>/<sub>4</sub> inches (57 mm).
2. Type II. Handrails with a perimeter greater than 6<sup>1</sup>/<sub>4</sub> inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3<sup>4</sup>/<sub>4</sub> inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5<sup>5</sup>/<sub>16</sub> inch (8 mm) within 7<sup>7</sup>/<sub>8</sub> inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3<sup>3</sup>/<sub>8</sub> inch (10 mm) to a level that is not less than 1<sup>3</sup>/<sub>4</sub> inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1<sup>1</sup>/<sub>4</sub> inches (32 mm) to a maximum of 2<sup>3</sup>/<sub>4</sub> inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm). (R311.5.6.3).

The top of handrail must be not less than 34 inches nor more than 38 inches above the nosing (front edge) of treads and they must be returned to a wall or post.

- h. The electrical code requires overhead power lines to be located a minimum of 10 feet above decks and platforms. Existing lines may need to be raised if a new deck is to be installed beneath them.
- i. When locating a deck, care must be given to the location of outside gas and electric meters, wells and septic systems. These

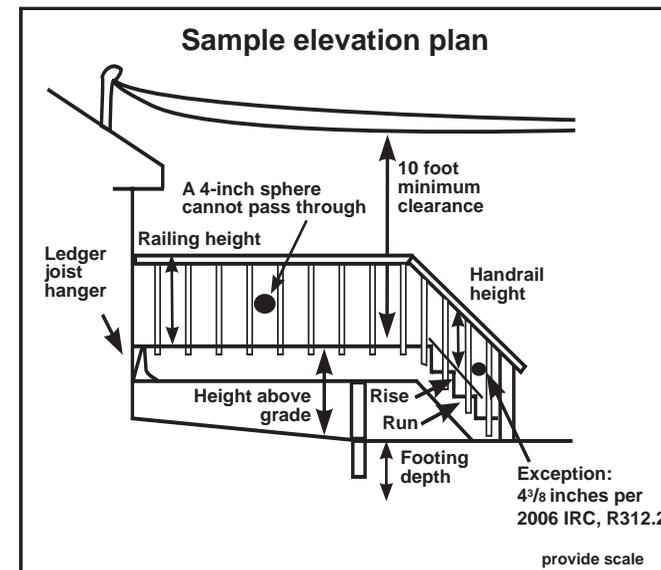
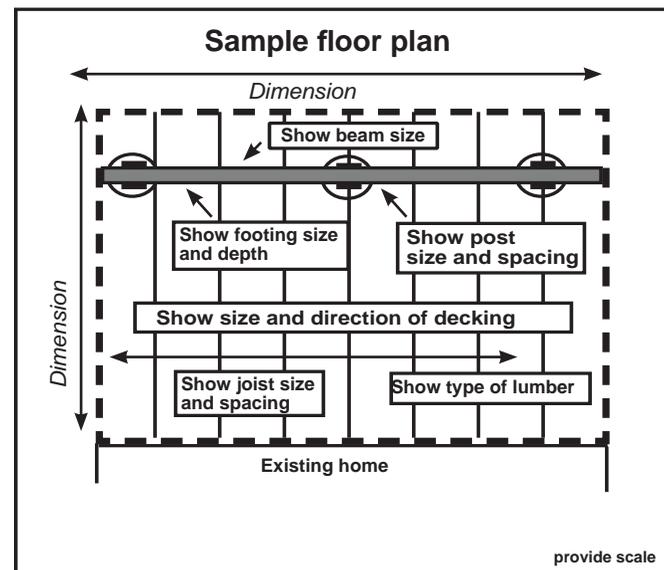
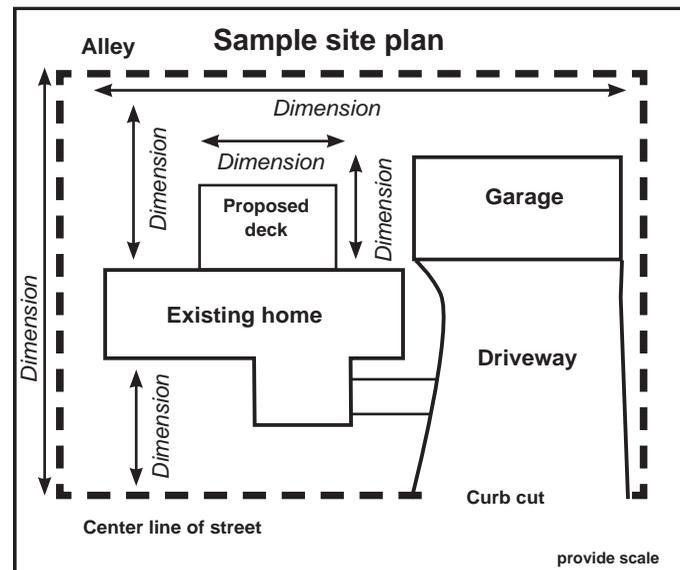
may need to be relocated to allow for construction of the deck. Septic systems and wells may be difficult to relocate, requiring an alternative location for the deck. Contact your local building department prior to placement of any deck that will interfere with these devices.

- j. Some communities use a remote outside water-meter-reading device that may need to be relocated to allow for construction of a deck. These devices must be relocated properly and may require special tools. Prior to placement of any deck that will interfere with the operation or accessibility of the reader, contact your local building department or water department to obtain information and procedures about relocating these devices. Note: For specific code requirements, please contact your local building department.

### Plans: Site, floor and elevation

The text and sample drawings below show the minimum detail expected to ensure the permit process proceeds smoothly. **Two sets of each site, floor and elevation plan are required.** Plans do not need to be professionally drawn. Plans should include all of the information requested and drawn to scale.

**A certificate of survey or site plan** should be drawn to scale that indicates the lot dimensions, the location and size of the existing structure(s) and the location and a size of the proposed structure. Indicate the setbacks from property lines of the existing and proposed structure(s). Include the septic system area and wells, if applicable.



### Floor plan

1. Proposed deck size.
2. Size and spacing of floor joists.
3. Size and type of decking material.
4. Size, type, location and spacing of posts.
5. Size and type of beams.

### Elevation plan

1. Height of structure from grade.
2. Size and depth of footings.
3. Guard height and spacing (if any).
4. Stairway rise or run and handrail height (if any).
5. Clearance of overhead wires (if applicable).