



**COLUMBIA  
-HEIGHTS-**  
REDISCOVER THE HEIGHTS

City of  
Columbia Heights  
Community Development  
Department

# Deck Permit Requirements

The following information must be submitted to the Community Development Department before a building permit can be processed and approved. A more detailed description of items 1-4 is listed.

- 1. Building Permit Application form.**
- 2. Survey or Site Plan [two copies].**
- 3. Building Plans [two copies].**
- 4. Miscellaneous as required.**

- 1. Building Permit Application:** Complete and sign a building permit application form. The forms are available at the Community Development Department or online at [www.ci.columbia-heights.mn.us/city\\_services/building\\_permits.asp](http://www.ci.columbia-heights.mn.us/city_services/building_permits.asp) After a preliminary review additional information may be required. A plan review by the City Planner and the Building Official is required prior to issuance of the permit.
- 2. Survey or Site Plan:** Provide an updated plan of the property showing all property lines, existing buildings [with dimensions] and project address or PIN number. Diagram the proposed deck location, dimensions and proposed setbacks from property lines, existing buildings and all topographical features. A registered survey may be required.
- 3. Building Plans [two sets]:**
  - A. Section drawing** [side, cutaway drawing] showing the footing width and thickness, post size, joist size, beam size, decking, height above grade, guardrail, cantilevers [overhang], anchoring, flashing, connectors and hanger types, include grade and species of lumber.
  - B. Floor Plans** of the deck showing the length and width of the deck, beam location, post spacing, joist spacing, stair location and type of lumber [pressure treated, redwood, cedar etc.].

#### **4. Miscellaneous:**

**Permit Fees:** Building and Zoning fees will be determined after the application and required plans have been approved. Fees must be paid in full before a permit can be issued or work can begin.

**Special Design Note:** Some designs may have to be modified if a future porch, addition, or hot tub is planned for installation on the deck. Footings, beams and joists should be sized for all future loads.

**Building Inspection Card:** Must be posted on the front door of the home or on storm door.

**If you have any questions, please contact the Community Development Department Monday - Friday, 8:00 AM to 4:45 PM at 763-706-3678.**



## **SETBACK AND OPEN SPACE REQUIREMENTS PER ORDINANCE 9.106**

1. **Yards-** Requirements shall be as specified for the zoning district in which the lot is located. No yard or other open space shall be reduced in area or dimension so as to make such yard or other open space less than the minimum required by this Ordinance. If the existing yard or other open space is less than the minimum required, it shall not be further reduced. In addition, no required yard or other open space allocated to a building or dwelling group shall be used to satisfy yard, open space, or minimum lot area requirements for any other structure or lot.
2. **Front Yard Setback Exception in Residential Districts.** In any Residential District where the average depth of the front yard for buildings within two hundred (200) feet of the lot in question and within the same block front is lesser or greater than that required by Ordinance, the required front yard for the lot in question shall be the average plus or minus ten (10) percent of the depth; however, the depth of the required front yard shall not be less than ten (10) feet nor more than fifty (50) feet.
3. **Corner Lots.** For corner lots, the shorter lot line abutting a public street shall be deemed the front lot line for purposes of this Ordinance, and the longer lot line abutting a public street shall be deemed a side lot line.
4. **Through Lots.** For through lots, both lot lines that abut a public street or other right-of-way shall be deemed front lot lines for purposes of this Ordinance, and the required front yard shall be provided along each front lot line.
5. **Yard Encroachments.** The following uses shall not be considered as encroachments into required yards, provided they are not located closer than one (1) foot to the property line, except for fences:
  - a) Cornices, canopies, awnings, eaves, bay windows and other ornamental features, provided they do not extend more than three (3) feet into the required yard.
  - b) Chimneys, air conditioning units, fire escapes, uncovered stairs, ramps and necessary landings, provided they do not extend more than four (4) feet into the required yard.

## GENERAL INFORMATION

**CANTILEVERS:** "Overhanging Joists and Beams" (deck only). Joists should not overhang beams by more than two feet, nor should beams overhang posts by more than one foot unless a special design is approved. The deck cannot be fastened to a building overhang unless documents show the structure is designed to accept the additional load.

**FLASHING:** All connections between deck and dwelling shall be weatherproof. Any cuts in exterior finish shall be flashed. If preservative treated wood is used check with manufacturer for proper material.

**FOOTINGS/POSTS:** Footings must be a minimum 42 inches below final grade. The base of the footing must be wide enough to transfer the weight of the deck to the soil. [Determine minimum footing size]. Posts must be pressure treated, heartwood redwood, heartwood cedar, concrete or other approved material.

**FRAMING:** The joists and beams must be sized to support a 40# per sq. ft. live load (See load tables for maximum spans and spacing). Header beams and joists that attach onto ledgers shall be supported by approved framing anchors, such as joist hangers. Manufacturer approved fasteners shall be used in accordance with their installation instructions.

**GUARDRAILS:** Residential decks 30" or more above adjacent grade must be protected by a guardrail with a minimum height of 36". Open guardrails shall have intermediate rails or ornamental pattern such that a 4" [four inch] sphere cannot pass through. Guardrail must be able to withstand a 200 pound load placed anywhere and any direction along rail.

**HANDRAILS:** A handrail is required on one side of stairs with four or more risers. The handrail must be 34" to 38" high (measured vertically from the toe of the tread), be continuous and uninterrupted the full length of the stairs. The handgrip portion of the handrail shall be not less than 1-1/4 inches nor more than 2-5/8 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The ends of the handrail shall be returned or terminate in a newel post or safety terminal. Edges shall have a minimum radius of 1/8".

**LEDGER:** Is required to be fastened to structure with a minimum of (2) 3/8" galvanized lag bolts spaced 16" on center or equivalent. Length shall penetrate the structural framing a minimum of 1-1/4".

**OVERHEAD POWER LINES:** A 10' minimum clearance is required from the surface of the deck finish to the overhead power lines. It is recommended that if possible relocate the power lines as to not cross over the deck at all.

### **REQUIRED INSPECTIONS:**

1. Footing inspection (before concrete is poured).
2. Framing
3. Final

Note: Framing and Final can occur at the same time if deck is greater than 47" above finished grade. For all inspections or questions call (763) 706-3678 between 8:00 am and 4:45 pm Monday through Friday. Please allow 2 to 3 working days for scheduling inspections.

**STAIRS/RESIDENTIAL:** The minimum width of a stairway is 36" inches in width. The maximum rise on stairs is 7 3/4". The minimum rise is 4". The minimum run of the treads is 10". The largest tread depth or riser height shall not exceed the smallest by more than 3/8". Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch-diameter sphere. Exception: The triangular opening formed by the riser, tread and bottom element of the guardrail may be sized so that a 6 inch sphere cannot pass through. All exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. The illumination of exterior stairs shall be controlled from inside the dwelling unit. Exception: Lights that are continuously illuminated or automatically activated.

**UPLIFT PROTECTION:** Provide 20 pound per square foot of uplift protection as calculated using the tributary area.

**WOOD REQUIRED:** All exposed wood used in the construction of decks is required to be of approved wood of natural resistance to decay (heartwood of Redwood, heartwood of Cedar) or approved preservative treated wood. This includes posts, beams, joists, decking and railings. The use of approved composite decking and railing materials is acceptable as long as the installation of composite decking is in accordance with the manufacturer's installation instructions. Note: Some composites cannot be used for stair treads.

For a current list of composite decking materials go to the 10,000 Lakes Chapter of the ICC website: [www.10klakes.org/Uniformity/2010/PLASTICD.pdf](http://www.10klakes.org/Uniformity/2010/PLASTICD.pdf) Only those products with a report number are approved.

**NOTE:** It is extremely important to read all reports thoroughly! Not all products are approved for use on stair treads. Additional Engineering may be required.

## MOST COMMON REASONS DECK INSPECTIONS FAIL

1. FOOTINGS NOT PROPERLY SIZED OR FULL OF WATER  
The City of Columbia Heights Inspection Department will check the size your footings during the plan review and mark sizes in red next to the appropriate footing on the plan. This is the minimum diameter the footing shall be at the base of the footing. The depth will always be 42 inches minimum. Also, if it is a rainy day, we will not pass a footing inspection if there is water in the hole. Remember to bell the bottom of the footing.
2. PLANS NOT ON THE JOB  
The inspectors need to have the copy of the approved plan at the site. The plan has the appropriate footing sizes as well as other needed corrections on it and we cannot do an inspection without that plan being on the site at the time of the inspection.
3. DID NOT CALL FOR FRAMING INSPECTION  
If the deck being built is less than 48 inches from the ground, a framing inspection is required before any decking is nailed on so we can see the joists, joist hangers and beams.
4. JOIST HANGERS NOT NAILED PROPERLY  
A joist hanger is an engineered piece of construction hardware. The hangers are designed with certain amount of holes which all have to be nailed with the proper size joist hanger nails. Hangers are stamped with fastener sizes. **DO NOT USE DECKING SCREWS** they are not rated for this application.
5. JOIST HANGERS NOT APPROVED FOR TREATED WOOD  
Not all joist hangers are rated for preservative treated applications. Check with hanger supplier for proper rating on hangers. Failure to have the proper hanger will be cause for replacement.
6. SPLICES IN BEAMS NOT OVER POSTS  
If the beam on a deck is too long to have one continuous piece of lumber, splices in that beam shall occur over the top of a post.
7. BOLT REQUIRED AT POST BEAM CONNECTION  
2X10 or larger beams require three ½” diameter bolts. 2X8 or smaller beams require two ½” diameter bolts.
8. LAG BOLTS IN LEDGER NOT 16” ON CENTER  
The ledger that is attached to the house, regardless of size of the deck, requires a minimum of two (2) lag bolts that are 4 ½” minimum in length and 3/8” minimum diameter spaced 16” on center maximum. (Don’t forget the flashing)
9. POSTS DO NOT LINE UP ON TOP OF FOOTINGS  
Posts should line up on the center 1/3 of the poured concrete footing with no portion of the post overhanging the concrete.
10. STAIRWAY RISERS AND TREADS NOT PER CODE  
Risers are measured from top of tread to top of tread or landing to top of tread in the case of the bottom step. All risers shall be equal and the maximum height a rise can be is 7 3/4”. The minimum height is 4”. Treads are measured from nose of tread to nose of tread. They must also be equal and a minimum depth of 10”. Bottom and top risers and treads are no exception. They must be equal. Open risers shall not allow a 4” sphere to pass.
11. HANDRAILS NOT PER CODE  
Every stairway over 30 inches in height requires guardrails on both sides with a minimum height of 34”. Every stairway with four or more risers requires an approved handrail on one side mounted 34-38 inches in height from nosing of tread to top of rail. The handrail shall be continuous the full length of the stairs and ends shall terminate into a newel post or be returned back into newel posts.
12. GUARDRAIL SPACING TOO LARGE  
Spacing must be less than 4”.
13. STAIRWAY ILLUMINATION NOT PRESENT  
All exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. The illumination of exterior stairs shall be controlled from inside the dwelling unit. Exception: Lights that are continuously illuminated or automatically activated.