



VILLAGE OF GRAYSLAKE
DEPARTMENT OF BUILDING AND ZONING
Ten South Seymour
Grayslake, IL 60030
(847) 223-8515

RESIDENTIAL WOOD DECK REQUIREMENTS

Permit Application Requirements:

1. Submit to the Building Department the following for review:
 - a) A completed Building Permit Application.
 - b) Provide three (3) copies of plat of survey dimensionally locating the deck with regards to property lines and any buildings.
 - c) Provide three (3) copies of the deck, pier, and framing plans indicating dimensions and materials (with sizes) to be used in construction. Include in these submittals all connection details, railing and guardrail details, etc.

Wood Deck Construction Guidelines:

1. All structural lumber, beams, wood deck flooring and other appurtenances shall be constructed of lumber that is preservative-treated, to prevent decay.
2. Framing and fasteners/connections shall comply with the International Residential Code (IRC) 2009, manufacturer's installation instructions and good engineering practices. All bolts, fasteners, etc., used must be compatible with preservative-treated wood. Check with the supplier to affirm compatibility.
3. Piers shall be a minimum of eight (8) inches in diameter of poured concrete, with level bottom, forty-two (42) inches below grade, framed up a minimum four (4) inches above finished grade. The pier diameter shall be designed for actual loads and soil bearing properties at the bearing level.
4. Simpson Strong-Tie post base or equivalent (as approved by the Code Official) shall be embedded in the concrete to receive a minimum 4 x 4 inch post or larger.
5. Porches, balconies, or wood deck floor surfaces located more than thirty (30) inches above the grade of floor below shall have guardrails.
6. Guardrails shall have a height of not less than thirty-six (36) inches in height measured vertically above the adjacent walking surfaces.
7. Required guardrails on open sides of balconies, porches or wood deck floor surfaces shall have intermediate rails or ornamental closures which will not allow the passage of an object four (4) inches in diameter.
8. Where the top of the guardrail serves as a handrail on open sides of stairs, the top of the guardrail shall not be less than thirty-four (34) inches and not more than thirty-eight (38) inches measured vertically from the line connecting the leading edges of the treads.

9. House siding or the exterior finish system must be removed prior to installation of the ledger board. Approved corrosion resistant flashing is required at any ledger board connection to a wall or wood framed construction.
10. Lag screws or bolts shall be placed 2" in from the bottom or top of the ledger board and between 2" and 5" in from the ends. The lag screws or bolts shall be staggered from the top and bottom along the horizontal run of the ledger board.
11. Simpson Strong-Tie DTT2Z with ½" diameter rod with nuts and washers or equivalent (as approved by the Code Official) shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds.
12. Maximum Deck Joist Spans:

Southern Pine

Joist Size	12" o.c.	16" o.c.	24" o.c.
2 x 8	13' – 1"	11' – 10"	9' – 8"
2 x 10	16' – 2"	14' – 0"	11' – 5"
2 x 12	18' – 0"	16" – 6"	13' – 6"

Douglas Fir-Larch, Hemlock-Fir, SPF

Joist Size	12" o.c.	16" o.c.	24" o.c.
2 X 8	12' – 6"	11' – 1"	9' – 1"
2 X 10	15' – 8"	13' – 7"	11' – 1"
2 x 12	18' – 0"	15' – 9"	12' – 10"

Redwood, Western Cedars, Ponderosa Pine, Red Pine

Joist Size	12" o.c.	16" o.c.	24" o.c.
2 x 8	11' – 8"	10' – 7"	8' – 8"
2 x 10	14' – 11"	13' – 0"	10' – 7"
2 x 12	17' – 5"	15' – 1"	12' – 4"

13. 5/4" x 6" deck boards should not span more than 16".
14. Cantilever shall not extend more than two (2.0') feet with a ratio three (3.0') feet in to one (1.0') foot out.
15. If a roof/canopy/cover is proposed or modified; a registered design professional must stamp and seal drawings and calculations, or the plans must detail how the plans are in compliance with the International Residential Code prescriptive method.

Note: This is informational only and DOES NOT contain all requirements for construction.

Contact J.U.L.I.E., 811, prior to digging.