



INFORMATION NEEDED FOR DECK PERMIT APPLICATION

The following must be submitted to the Inspector for approval:

- A completed **Building Permit application**.
- A **current survey map** showing the proposed location of the deck, as well as ***all other structures on lot (sheds, pools, detached garages, etc.)***.
- 3 sets of **detailed drawings of the deck structure, to include materials, dimensions and elevations**, drawn to 1/4" scale.
- **Subdivision approval** (if required by the subdivision board).

*Note: The approval process may take up to two weeks dependent on workload; however, information and plans/drawings must be complete for the review process to begin. Please provide a complete set of drawings/plans and all requested information with the Building Permit application. **Failure to provide the required info will cause delays and possible rejection of permit application.** Building Permits are valid for one year. Work must begin with 6 months of issuance of permit.*

Permit fee is \$10 per \$1,000 of construction value or \$50 minimum, plus \$35 Plan Review fee, \$50 Occupancy Permit fee and \$5 Technology Fee. Fees are paid when the permit is picked up.

17.0704 (A)(4) Decks located adjacent to a principal structure shall be located not closer to a lot line than the required side yard and rear yard requirements for the district in which they are located and shall require the issuance of a building permit. Freestanding decks or decks surrounding private swimming pools separated from the principal structure shall be located at least 10 feet from the principal structure and shall be regulated in the same manner as an accessory garage, tool shed, or gazebo.

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- 2) *Multiply the floor area by the code required live load and actual dead loads. Do the same for any roof area.*
- 3) *Divide the total load from 2) by the allowable soil bearing value listed in the Table at the end of s. Comm 21.15(2) to find the minimum footing size in square feet.*
- 4) *To provide adequate spread of the load through the concrete or gravel footer, its thickness should be at least one-half of its diameter, but in no case less than 8".*

(2) **SOIL-BEARING CAPACITY.** No footing or foundation shall be placed on soil with a bearing capacity of less than 2,000 pounds per square foot unless the footing or foundation has been designed through structural analysis. The soil-bearing values of common soils may be determined through soil identification.

Note: The department will accept the soil-bearing values for the types of soil listed in the following table:

Type of Soil	PSF
1. Wet, soft clay; very loose silt; silty clay	2,000
2. Loose, fine sand; medium clay; loose sandy clay soils	2,000
3. Stiff clay; firm inorganic silt.....	3,000
4. Medium (firm) sand; loose sandy gravel; firm sandy clay soils; hard dry clay.....	4,000
5. Dense sand and gravel; very compact mixture of clay, sand and gravel	6,000
6. Rock	12,000

(a) Minimum soil-bearing values. If the soil located directly under a footing or foundation overlies a layer of soil having a smaller allowable bearing value, the smaller soil-bearing value shall be used.

(b) Unprepared fill material, organic material. No footing or foundation shall be placed upon unprepared fill material, organic soil, alluvial soil or mud unless the load will be supported. When requested, soil data shall be provided.

Note: The decomposition of organic material in landfill sites established for the disposal of organic wastes may produce odorous, toxic and explosive concentrations of gas which may seep into buildings through storm sewers and similar underground utilities unless provisions are taken to release the gases to the atmosphere.

Comm 21.16 Frost penetration.

(1) **GENERAL.** Footings and foundations, including those for ramps and stoops, shall be placed below the frost penetration level, but in no case less than 48 inches below grade measured adjacent to the footing or foundation. Footings shall not be placed over frozen material.

(2) **EXCEPTIONS.** (a) Floating slabs constructed on grade need not be installed below the minimum frost penetration line provided measures have been taken to prevent frost forces from damaging the structure.

- 1 Spans shall be limited to values shown, based on possible effect of concentrated loads.
- 2 Unsupported edges shall be tongue and groove or blocked except where 1/4-inch underlayment or 25/32-inch finish floor is used.
- 3 Underlayment, C-C Plugged, sanded exterior type: allowable uniform load based on deflection of L/360 span for spans 24 inches or less is 125 psf; and for spans 48 inches, 65 psf.
- 4 The department will accept subfloor underlayment panels such as Sturd-I-Floor which meet the requirements of APA manufacturing specifications for Sturd-I-Floor panels.

TABLE 21.22-E

MINIMUM THICKNESS OF FLOOR BOARDS

Joint Spacing (inches)	Minimum Net Thickness (inches)	
	Perpendicular to Joist	Diagonal to Joist
24	1 1/16	3/4
16	5/8	5/8

Comm 21.225 Decks.

Decks attached to dwellings and detached decks which serve an exit shall comply with the applicable provisions of this chapter, including but not limited to:

- (1) Excavation requirements of s. Comm 21.14;
- (2) Footing requirements of s. Comm 21.15 (1) (f);
- (3) Frost penetration requirements of s. Comm 21.16;
- (4) Load requirements of s. Comm 21.02;
- (5) Stair, handrail and guardrail requirements of s. Comm 21.04; and
- (6) Decay protection requirements of s. Comm 21.10.

Subchapter VII — Walls

Comm 21.23 Wall design.

(1) **LIVE AND DEAD LOADS.** All walls shall support all superimposed vertical dead loads and live loads from floors and roofs.

CHAPTER IV. -- DECKS

SECTION 30.30 GENERAL REQUIREMENTS

(1.) DEFINITIONS

- (a.) Deck: Any structure which serves as a raised horizontal platform on floor constructed of wood or other materials, without enclosing walls or roof.
- (b.) Attached Deck: Any deck which is physically connected to the principal building or accessory structure.
- (c.) Detached Deck: Any deck which is not physically attached to the principal building or accessory structure.

(2.) SOIL AND EXCAVATION REQUIREMENTS FOR DECK PIERS OR FOUNDATIONS

- (a.) No pier shall be placed on soil with a bearing capacity of less than 2,000 lbs. per square foot unless the pad support is designed through structural analysis.
- (b.) All organic material (roots, etc.) shall be cut off at the sidewalls of the borings or trench. All organic and loose material must be removed from the cavity area prior to pouring concrete.

(3.) DECKS PIERS, PADS AND FOUNDATIONS

- (a.) General footings, pads or piers shall be of adequate bearing area to safely distribute all live and dead loads to the supporting soil without exceeding the bearing capacity of the soil.
- (b.) Type and size of concrete pads, piers or foundations.
 - 1. Decks attached to principal buildings.
 - a. Concrete Pads - The minimum depth of a pad shall be 48" below grade. The minimum dimensions of this pad shall be 4" in depth and 8" in diameter.
 - b. Piers - The minimum depth of concrete piers shall be 48" below grade. The minimum dimension of this pier shall be 8" in diameter. (The concrete pier(s) shall extend a minimum of 6" above grade unless an approved mounting bracket is secured at the top surface of the pier(s)).
 - c. Direct burial wood posts shall be placed on a minimum 2" nominal thickness treated plat or other approved materials at a uniform depth below grade. Posts shall be treated to the requirements of the American Wood Preserver's Association (AWPA) standards for direct soil contact 4" below grade. Post shall be a minimum of 4' below established grade.

(4.) FRAMING

(a.) General Requirements.

1. **Materials.** All wood framing used in deck construction shall be pressure treated against decay or shall be a species of wood that is naturally decay resistant or shall be protected from weather.
2. **Design loading.** Decks shall be designed for a minimum of a 40 pound per square foot loading.
3. **See fastener schedule for nailing requirements.** All fasteners and hangers shall be corrosion resistant to weather and the type of chemically treated wood they are in direct contact with.

(b.) Column Posts.

1. **Column spacing.** Column posts shall be spaced per "Table No. 2".
2. **Column size.**
 - a. All column posts not exceeding six feet (6 feet) in height shall be a minimum of four inches by four inches (4 X 4) nominal thickness.
 - b. All column posts exceeding six (6) feet in height shall be a minimum of six inches by six inches (6 X 6) nominal thickness.
3. **Lateral support.** Column posts shall be constructed in such a manner or mechanically attached to the deck foundation to resist lateral movement.

(c.) BEAMS

1. **Beam Size --** All beams shall be sized per "Table No. 2".
 - a. Beams, except as otherwise noted in "Table No.2", SHALL BE A MINIMUM OF TWO (2), TWO (2) INCH THICK MEMBER OF ONE (1), FOUR (4) INCH THICK MEMBER. (I.E., 2 - 2X8 OR 1 - 4X8).
 - b. Beams may be spaced on each side of the post provided that blocking is installed a minimum of twenty four (24) inches.
2. **Bearing.** Beams bearing directly on the posts shall be attached by means of approved metal anchors or other approved methods.
3. **Ledger boards.** Ledger boards attached directly to the house or other structure may be used to replace a beam or beams. A single member of equal depth to the required size beam shall be used. The ledger board shall be attached with two (2) ½" bolts, (2) ½" lag bolts or equivalent fasteners, spaced no less than 16 inches on center, secured directly into

the building structure. Flashing shall be installed between the ledger and building structure.

4. Beams shall not be cantilevered more than twelve (12) inches past the column post.

(d.) JOISTS

1. Joist size. All deck joists shall be sized and spaced per "Table 2".
2. Bearing. Deck joists shall bear a minimum of one and one half (1-1/2) inches on the beam or ledger board. Joists fastened to the face of the beam or ledger shall be attached with approved metal hangers.
3. Bridging. Bridging shall be provided at intervals not exceeding eight (8) feet.
4. Overhanging of joists. Joists which are at right angles to the supporting beam shall not be cantilevered more than two (2) feet past the supporting beam, unless designed by structural analysis.

(e.) DECKING

1. Material. All decking material shall be a minimum of one and one quarter (1-1/4) inches thick, nominal thickness. One inch decking may be used provided that the joists are spaced no more than 16" o.c.
2. Decking Orientation.
 - a. Decking shall be installed diagonally or at right angles to the joists.
 - b. Decking shall be centered over joists with cuts made Parallel to joists. Not more than two adjacent boards may break joints on the same joist except at ends and at openings.

(f.) GUARDRAILS AND HANDRAILS

1. Guardrails. All decks which are more than twenty four (24) inches above grade shall be protected with guardrails.
2. Handrails. Every stairway of more than three (3) risers shall be provided with at least one handrail. Handrails shall be provided on the open sides of stairways.
3. Guardrails and handrail detail.
 - a. Handrails and guardrails shall be constructed of metal, decay resistant or pressure treated wood.

- b. Height. Handrails shall be located at least thirty (30) inches, but not more than thirty-eight (38) inches, above the nosing of the treads. Guardrails shall be located at least thirty-six (36) inches above the surface of the deck.
- c. Open railings. Open guardrails or handrails shall be provided with intermediate rails or an ornamental pattern to prevent the passage of a sphere with a diameter of four (4) inches or more.
- d. Railing loads. Handrails and guardrails shall be designed and constructed to withstand a 200 pound load applied in any direction.
- e. The clearance between a handrail and the wall surface shall be at least 1 ½ inches.
- f. Projection. Handrails and associated trim may project into the required width of stairs and landings a maximum of 4 ½ inches on each side.
- g. Size and configuration. Handrails shall be symmetrical about the vertical centerline to allow for equal wraparound of the thumb and fingers.
 - 1. Handrails with a round or truncated round cross sectional gripping surface shall have a maximum whole diameter of 2 inches.
 - 2. Handrails with a rectangular cross sectional gripping surface shall have a maximum perimeter of 6 ¼ inches with a maximum cross sectional dimension of 2 7/8 inches.
 - 3. Handrails with other cross sections shall have a maximum cross sectional dimension of the gripping surface of 2 7/8 inches with a maximum linear gripping surface measurement of 6 ¼ inches and a minimum linear gripping surface of 4 inches.

(g.) STAIRWAY, TREADS AND RISERS

- 1. Risers. Risers shall not exceed eight (8) inches in height measured from tread to tread.
- 2. Treads. Treads shall be at least nine (9) inches wide, measured horizontally from nose to nose.
- 3. Variation. There shall be no variation in uniformity exceeding 3/16 inch in the width of a tread or in the height of risers. For sloping grades at the bottom of a deck stairway, the riser height shall be measured at the center of the stair tread.

4. Stair stringers shall be supported in accordance to the same manor as used for the deck.
5. Stairways shall be at least 3 feet in width.

(h.) ALTERNATIVE PROVISIONS AND METHODS.

1. Wood Decks. Wood decks attached to the dwelling may be constructed to the Uniform Dwelling Code standards listed below.
 - a. Excavation requirements of s. COMM 21.14
 - b. Footing requirements of s. COMM 21.15
 - c. Frost penetration requirements of s. COMM 21.16
 - d. Load requirements of s. COMM 21.02
 - e. Floor construction requirements of COMM 21.22
 - f. Stair, handrail and guardrail requirements of s. COMM 21.04
 - g. Decay protection requirements of s. COMM 21.10
2. New materials and methods shall comply with the provisions of Section 30.60.
3. Detached decks must:
 - a. Concrete pads shall be provided at a uniform depth below grade with all loose or organic material moved from the pad area prior to placement of concrete. The pad shall have a minimum depth of 4" thick and 8" in diameter.
 - b. Piers -- The minimum of 8" diameter concrete piers shall be at a uniform depth below grade.
 - c. Direct burial wood posts shall be placed on a minimum 2" nominal pressure treated plate or other approved materials at a uniform depth below grade. Posts shall be treated to at a uniform depth below grade. Posts shall be approved for direct soil contact.
 - d. Ground contact framing shall be allowed for decks which are less than 24" above grade. All materials in direct contact with the soil shall be treated to the requirements of the American Wood Preservers' Association (AWPA) standards.

