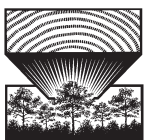


# GROUND-LEVEL DECK



**SOUTHERN  
PINE  
COUNCIL**

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## Ground-Level Deck

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Decks can work wonders in many different ways...contemporary in style, yet simple and natural. They blend home and landscape with broad, inviting vistas creating a feeling of freedom and expansiveness and offer an oasis of comfort in the open air. Sometimes the best room of the house is outside on the wood deck.

Naturally versatile, a deck can be a breakfast room on sunny mornings, a play area for children, a sitting room for reading, a kitchen for cookouts, or a living room for garden parties.

Pressure-treated Southern Pine is the ideal material for building your new deck. Its inherent properties — exceptional strength, treatability, fastener and nail-holding ability, and high resistance to wear — provide excellent durability.

This ground-level deck plan will take you step by step through the construction process. The design uses Southern Pine Radius Edge Decking (R.E.D.) in a parquet configuration for a great-looking addition to your outdoor living space.

## MATERIALS LIST

To build this deck, you will need the following quantities of pressure-treated Southern Pine lumber:

NUMBER OF PIECES	MATERIAL	LENGTH	SERVICE CONDITION
4	2x8	20'	Ground Contact
4	2x4	20'	Above Ground
2	2x8	12'	Ground Contact
2	2x8	10'	Ground Contact
32	2x6	10'	Above Ground
8	2x2	10'	Ground Contact
84	5/4x6* R.E.D.	10'	Above Ground

\*Specify Southern Pine Radius Edge Decking, either Premium R.E.D. or Standard R.E.D. grade.

## OTHER MATERIALS NEEDED:

- 8d,10d & 12d hot-dip galvanized nails  
(See Fastener Advisory)
- 40¼"x3" hot-dipped galvanized lag screws
- 21 concrete blocks, 4"x8"x16"
- Concrete or gravel for footings
- Construction adhesive for pressure-treated lumber.
- Water repellent sealer

## TOOLS REQUIRED

- Hammer
- Carpenter's rule or tape
- Drill with 3/16" bit
- 1/2" hex wrench or socket wrench
- Crosscut or circular saw
- Square
- Stakes, line, level

## ADVISORY:

### Fastener & Connector Performance for Treated Wood

Metal products in contact with pressure-treated wood must be corrosion resistant. Examples include flashing, termite shields, fasteners (e.g. nails, screws, and bolts), and all connecting hardware (e.g. joist hangers, straps, hinges, post anchors, and truss plates).

The International Residential Code, Section R319.3 states, "Fasteners for pressure-preservative treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper. **Exception:** One-half inch (12.7mm) diameter or greater steel bolts."

Traditionally, the treated wood industry has recommended hot-dip galvanized or stainless steel fasteners and connectors for wood products treated with Chromated Copper Arsenate (CCA). Hot-dip galvanized or stainless steel fasteners and connectors continue to be recommended for use with alternative wood preservatives (e.g. Alkaline Copper Quat - ACQ - and Copper Azole), but additional clarification is needed to ensure adequate corrosion protection.

Type 304 or 316 stainless steel is recommended for maximum corrosion resistance in more severe exterior applications, such as swimming pools and salt-water exposure. Furthermore, stainless steel fasteners are generally required below grade for permanent wood foundations.

Hot-dip galvanized fasteners and connectors are generally acceptable for above grade applications. Hot-dip galvanized *fasteners* should meet ASTM A153 (with 2 ounces of zinc coating per square foot minimum for marine use) and hot-dip galvanized *connectors* should meet ASTM A653, Class G185 sheet with 1.85 ounces of zinc coating per square foot minimum. Fasteners and connectors used together should be of the same type (e.g. hot-dip nails with hot-dip joist hangers).

*Do not use standard carbon-steel or aluminum products in direct contact with pressure-treated wood.* Spacer materials or other physical barriers are recommended to prevent direct contact. In addition, electroplated galvanized metal products generally have a thinner layer of protection compared to hot-dip galvanized and are typically not accepted by the building codes for use in exterior applications.

Fasteners and connectors coated with proprietary anti-corrosion technologies (other than stainless steel or hot-dip galvanized) are also available for use with treated wood. Consult individual hardware manufacturers for specifics regarding the performance of their products with treated wood.

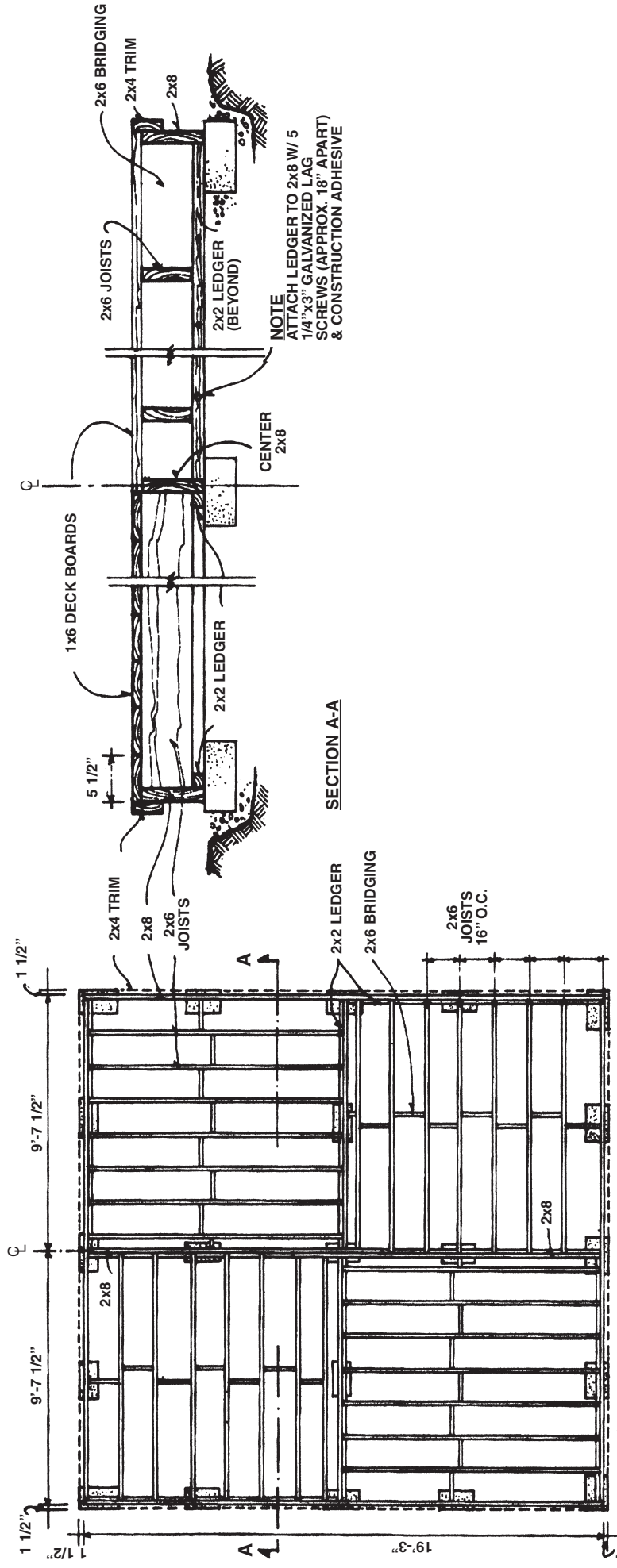
## CONSTRUCTION STEPS

1. Determine exact location of the deck. On the sides that will adjoin your house or other building, omit 2x4 trim pieces.
2. Choose one of the footing options for support of the concrete blocks. Refer to plan for footing locations; the top of the blocks should be at ground level. Use stakes, line, and level to aid positioning of footings and blocks.
3. Build perimeter deck frame by cutting two 2x8s to 19'-6" and two more to 19'-3". Make a square frame using 12d nails and construction adhesive.
4. Install center support using two 12' 2x8s overlapping them at the center. Position them along the centerline of the deck frame. Use 10d nails and construction adhesive to nail the overlapping sections together and to attach this center support to the deck frame.
5. Complete the basic support frame by cutting two 2x8s to fit between the deck frame and the center support. Use 10d nails and construction adhesive to attach them to the deck frame along the centerline. Use 12d nails to toe-nail these members to the overlapping 2x8 sections of the center support. Make sure entire deck frame assembly remains square.
6. Determine the deck board direction for your parquet pattern in each of the four quadrants.
7. Attach 2x2 ledgers to the 2x8 deck frame and center supports. Ledgers support both ends of the 2x6 joists. Be sure combined ledger and 2x6 joist height is flush with top of 2x8s. Attach ledger to 2x8s using construction adhesive and the galvanized lag screws. Use 5 screws per ledger, spacing them about 18" apart. Pre-drill 3/16" holes to receive lag screws.
8. Install 2x6 joists 16" on center perpendicular to deck board direction in each quadrant. Use 10d nails. Refer to plan for exact joist positioning. Check for square.
9. Along the centerline of each quadrant, install 2x6 bridging between the joists. Stagger their placement to aid nailing; use 10d nails. Tops of bridging and joists should be flush.
10. Begin arranging 10' 1x6 deck boards. Start at the center of the deck and build the parquet pattern out to each edge, allowing the board length to hang over the 2x8 perimeter deck frame.
11. Attach deck boards to frame and joists using 8d nails and construction adhesive. When nailing near the end of the boards, remember to either blunt nail points or pre-drill holes to avoid splitting.
12. When all 21 deck boards per quadrant have been attached, evenly cut all the ends flush with the 2x8 perimeter frame.
13. Attach the 2x4 trim pieces to the 2x8 frame using 10d nails. The top edge of the 2x4 trim should align with the deck boards' surface.
14. Construction is complete. Apply a coat of water-repellent sealer to all exposed surfaces.

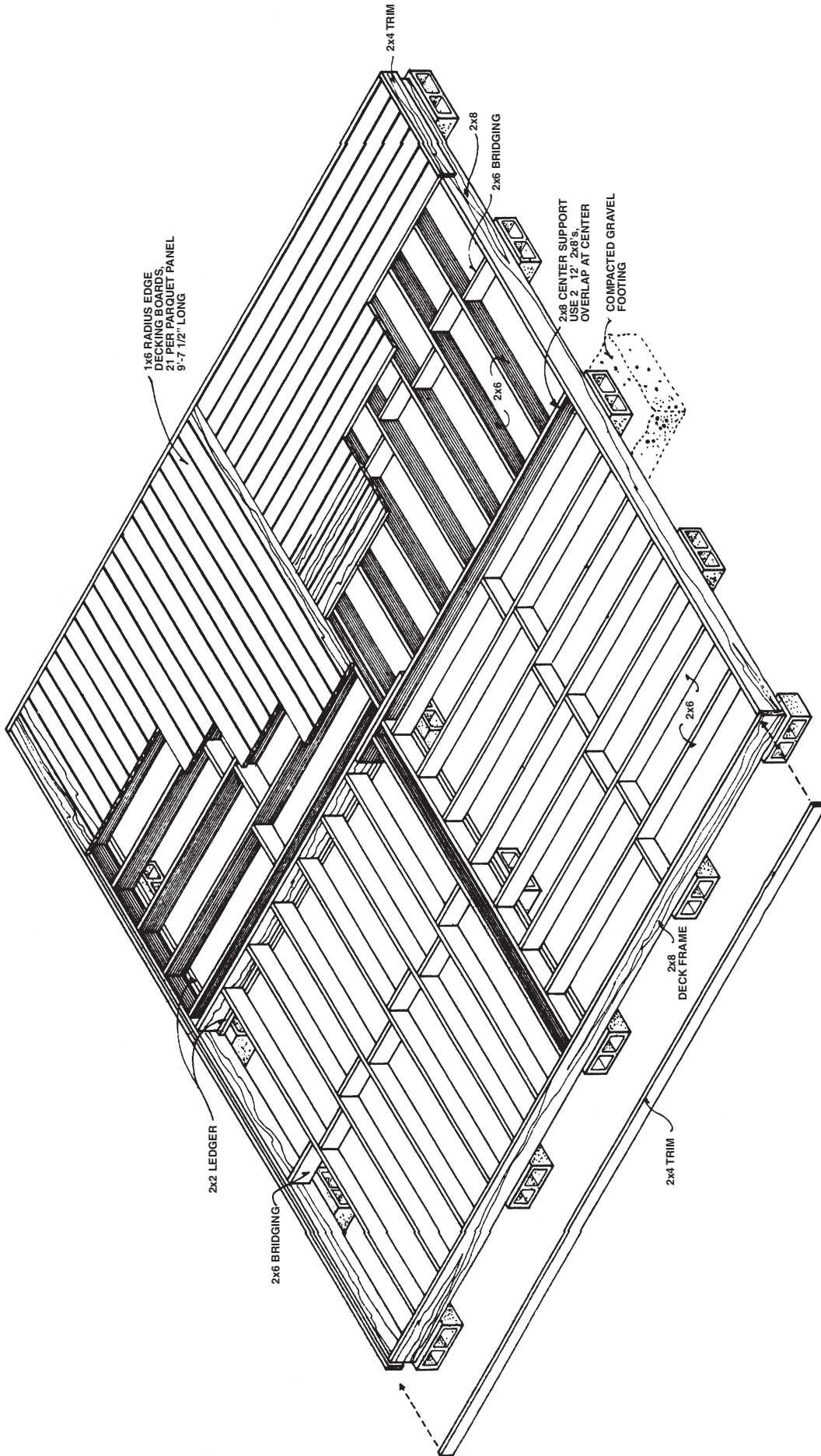


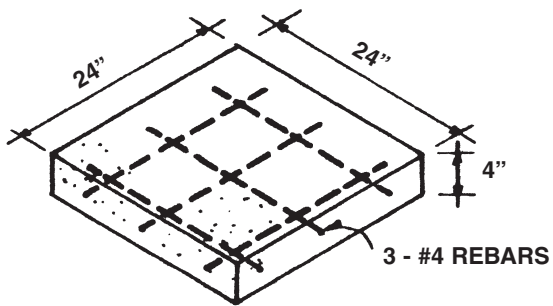
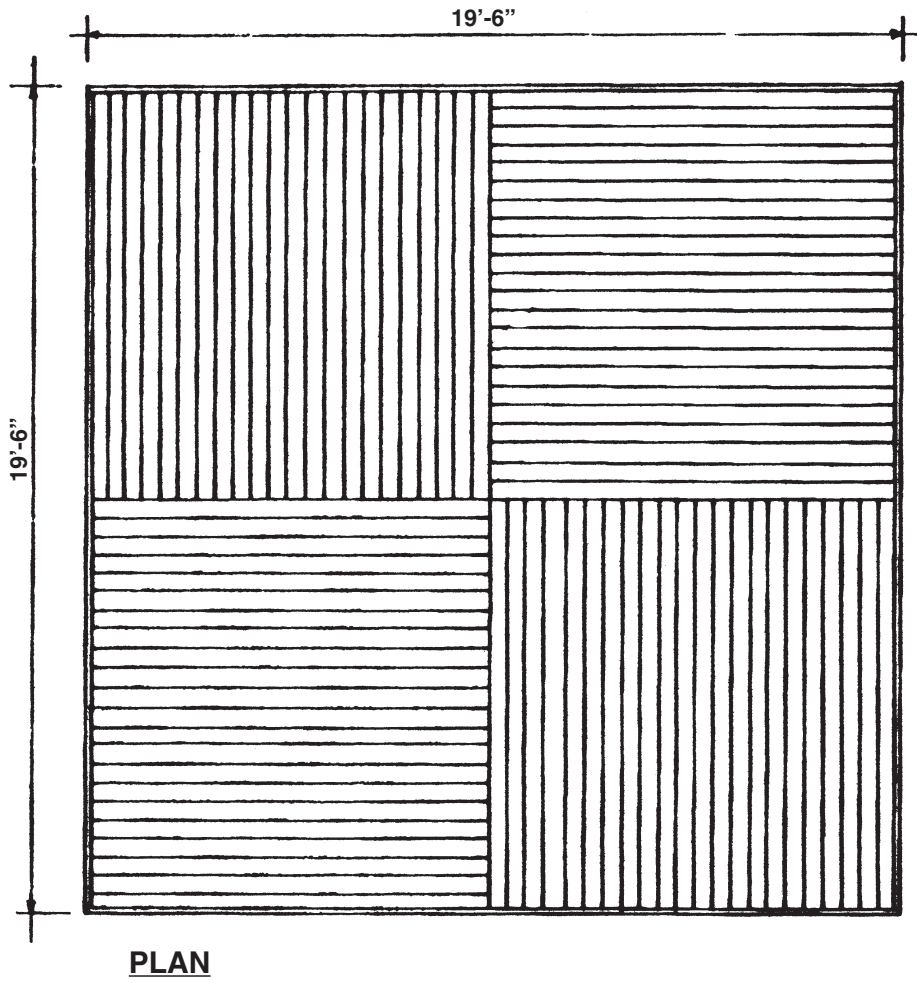
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These plans and the information contained herein will help you achieve the best possible results in working with Southern Pine lumber products. The conditions under which lumber is used in construction vary widely, as does the quality of workmanship. Since neither the Southern Pine Council nor its members control the method of use or the quality of workmanship in structures built with lumber, they do not warrant lumber performance or design in completed structures.

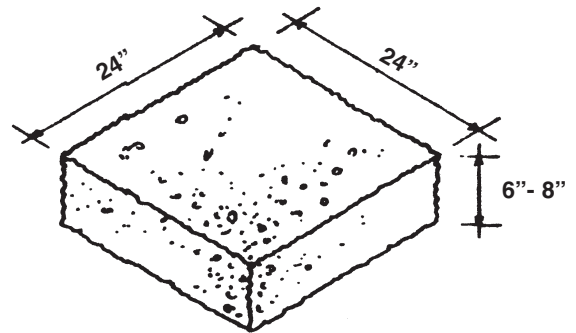


STRUCTURE





**CONCRETE FOOTING**



**COMPACTED GRAVEL FOOTING**

**FOOTING OPTIONS BENEATH CONCRETE BLOCKS**