RESIDENTIAL WOOD DECK GUILD & PLANS

## Building Permits

Building Permits are required for decks. When making application, provide the following:

1. 2 sets of construction plans
2. 1 site plans indicating size, shape, placement, and distance from property lines and easements.
3. Building permit application filled out.

Required inspections

* + 1. Address on house min 4” tall and 1\2” wide
    2. Post hole inspection (HOLES DUG AND CONCRETE IN)
    3. Rough framing inspection (IF UNDER 48” FROM GROUND)
    4. Final inspection
    5. Some decks may require additional inspections

## Foundation

Posts to be set a minimum of 42” below grade minimum 12” round with minimum 6” of concrete and shall bear undisturbed soil.

## Framing

All material in contact with the ground shall be approved suitable for ground contact use. All other material shall be pressure treated of decay resistant decay or redwood.

## Framing Fasteners

All nails, bolts, brackets and fasteners to the house with lag screws or carriage bolts into the rim joist of the main structure. Z flashing must be provided over the ledger board.

## Stairway

All stairs are required to be lighted

1. Stairways shall have a light source at the top landing that provides light to the stairs and landings.
2. The light switch shall be controlled from the inside of the house. Motion detectors or timed switches are acceptable.

TYPICAL FOOTING DETAIL & POST AND BEAM CONNECTION

4X6 OR 6X6 NOTCHED POST WITH ½” THRU BOLTS OR EQUIVALENT

TYPICAL 4X4 WITH APPROVED CONNECTORS

6x6 REQUIRED AT BEAM SPLITS 1/2” THRU BOLTS OR EQUIVALENT @ EACH BEAM

GRADE LINE

42” BELOW

FINAL GRADE

MINIMUM

CONCRETE PAD THICKNESS

(6” MIN)

FOOTING WIDTH

(12” MINIMUM)

FOOTING WIDTH

(12” MINIMUM) 

JOIST SPAN

APPROVED ANCHORS

DO NOT BOLT TO SIDES

SOLID CONCRETE

DO NOT MIX CONCRETE IN HOLES

USE CLEAN WATER ONLY

ALLOWED JOIST SPANS

1. SPANS ARE BASED ON SOUTHERN YELLOW PINE
2. SPANS ARE IN FEET AND INCHES
3. 19.4 AND 24” SPACING ARE FOR 2 X DECKING ONLY

ALLOWED BEAM SPANS

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DECK JOIST SPAN, LESS THEN OR EQUAL TO (FEET) | | | | | | | | | | |
| BEAM SIZE | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 2-2X6 | 6-11 | 6-5 | 5-11 | 5-7 | 5-4 | 5-1 | 4-10 | 4-8 | 4-6 | 4-4 | 4-3 |
| 2-2X8 | 8-9 | 8-3 | 7-7 | 7-3 | 6-9 | 6-5 | 6-2 | 6-0 | 5-9 | 5-6 | 5-4 |
| 2-2X10 | 10-4 | 9-7 | 9-0 | 8-61 | 8-0 | 7-7 | 7-4 | 7-1 | 6-9 | 6-6 | 6-4 |
| 2-2X12 | 12-2 | 11-4 | 10-7 | 10-1 | 9-5 | 9-1 | 8-7 | 8-3 | 8-0 | 7-9 | 7-6 |
| 3-2X6 | 8-2 | 7-8 | 7-5 | 7-1 | 6-8 | 6-4 | 6-1 | 5-9 | 5-8 | 5-5 | 5-3 |
| 3-2X8 | 10-10 | 10-2 | 9-6 | 9-0 | 8-6 | 8-2 | 7-9 | 7-5 | 7-2 | 7-11 | 6-8 |
| 3-2X10 | 13-0 | 12-1 | 11-3 | 10-7 | 10-0 | 9-6 | 9-2 | 8-9 | 8-6 | 8-2 | 7-11 |
| 3-2X12 | 15-3 | 14-3 | 13-3 | 12-5 | 11-10 | 11-0 | 10-9 | 10-4 | 10-0 | 9-8 | 9-4 |

1. SPAN ARE BASED ON SOUTHERN YELLOW PINE
2. SPANS ARE IN FEET AND INCHES

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SPACING OF JOIST NO CANTILEVER | | | | SPACING OF JOIST WITH CANTILEVER | | | |
| JOIST SIZE | 12” | 16” | 19.4” | 24” | 12” | 16” | 19.4” | 24” |
| 2X6 | 9-11 | 9-0 | 8-3 | 7.7 | 6-8 | 6-8 | 6-8 | 6-8 |
| 2X8 | 13-1 | 11-10 | 10-4 | 9-8 | 10-1 | 10-1 | 9-9 | 9-8 |
| 2X10 | 16-2 | 14-0 | 11-5 | 11-5 | 14-6 | 14 | 12-7 | 11-5 |
| 2X12 | 18 | 16-6 | 15-1 | 13-6 | 18-0 | 16-6 | 15-1 | 13-6 |

ALLOWED JOIST & STRINGER SPACING

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SPACING OF JOIST NO CANTILEVER | | | | SPACING OF JOIST WITH CANTILEVER | | | |
| JOIST SIZE | 12” | 16” | 19.4” | 24” | 12” | 16” | 19.4” | 24” |
| 2X6 | 9-11 | 9-0 | 8-3 | 7.7 | 6-8 | 6-8 | 6-8 | 6-8 |
| 2X8 | 13-1 | 11-10 | 10-4 | 9-8 | 10-1 | 10-1 | 9-9 | 9-8 |
| 2X10 | 16-2 | 14-0 | 11-5 | 11-5 | 14-6 | 14 | 12-7 | 11-5 |
| 2X12 | 18 | 16-6 | 15-1 | 13-6 | 18-0 | 16-6 | 15-1 | 13-6 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | JOIST & STRINGER SPACING | | |
| DECKING SIZE | 90° TO JOIST | 45° TO JOIST | STRINGERS |
| 5\4 DECK BOARDS | 16” O.C. MAX | 12” O.C. MAX | 16” O.C. MAX |
| 2X6 DECK BOARDS | 24” O.C. MAX | 16” O.C. MAX | 24” O.C. MAX |
| COMPOSITE DECKING | PER MANUFACTURER INSTALLATION INSTRUCTIONS | | |

1. COMPOSITE DECKING REQUIRED TO MEET PROPER FLAME SPREAD RATING.

FRAMING FOR ATTACHED TO HOUSE

ADD BEAMS FOR MULTIPLE SPANS

DECK SIZE: X

JOIST SIZE: 2 X

SPACING 12” 16” 24”

SPAN:

CANTILEVER SPAN:

BEAM SIZE: 2 x 2 x

BEAM SPACING:

BEAM SPAN:

(POST SPACING)

CANTILEVER SPAN:

APPROVED HANGERS REQUIRED

36” MINIMUM

STAIRWAY WIDTH

LATERAL BRACING REQUIRED WHEN DECK HEIGHT IS OVER 4’

FRAMING FOR FREE STANDING

2 OR MORE BEAMS FOR MULTIPLE SPANS

DECK SIZE

JOIST SIZE: 2 X

SPACING: 12” 16” 24”

JOIST SPAN:

CANTILEVER SPAN:

BEAM SIZE: 2 X 2 X

BEAM SPACING:

BEAM SPAN:

(POST SPACING)

CANTILEVER SPAN:

HOUSE

36” MINIMUM

STAIRWAY WIDTH

LATERAL BRACING REQUIRED WHEN DECK HEIGHT IS OVER 4’

GUARDRAILS

4

X

4

2X JOIST BLOCKING

MIN 3 SIDES

H

O

U

S

E

DO NOT NOTCH RAIL POST

2-1\2” THRU BOLTS OR EQUIVALENT

ALL 3 SIDES

MAXIMUM 4”

GUARD RAIL HEIGHT \_\_\_\_\_\_\_\_

(MINIMUM IS 36”)

30” AND OVER REQUIRES A GUARD RAIL

60” AND UNDER REQUIRES 3RD INSPECTION

4

X

4

BLOCKING

TYPICAL GUARDRAIL

JOIST

JOIST

4x4

SPINDLE TYPE \_\_\_\_\_\_\_\_\_\_\_\_\_

WOOD METAL COMPOSITE

SPINDLE SPACING \_\_\_\_\_\_\_\_\_\_

(MAXIMUM 4”)

MAX 6’ BLOCK BOTTOM AT 3’

GRASPABLE CONTINUOUS HANDRAIL WITH ENDS RETURNED REQUIRED WITH 4 OR MORE RISERS ON ONE SIDE

STAIR & HANDRAIL DETAILS

1 ½ MINIMUM

2¼ MAX

G

U

A

R

D

R

A

I

L

34” TO 38” HEIGHT

1 ¼ MIN

2 MAX

1 ¼ ” MIN

2 ¾” MAX

3/4 MAX

1 ¾ MIN

7/8 MAX

3/8 MIN

5/16 MIN

4 ½ MAXIMUM

34 ½ “MINIMUM HEIGHT

FOR GUARDRAIL

4” MAXIMUM OPENING ON RISERS OVER 30” FROM GRADE

6” MAX OPENING

APPROVED HANGERS

STRINGER SPACING\_\_\_\_\_\_\_”

RISER HEIGHT

(8 ¼” MAXIMUM HEIGHT)

(NO MORE THEN 3/8” DIFFERENCE

IN HEIGHT)

TREAD DEPTH “

(9” MINIMUM TREAD WITH ¾” TO 1 ¼” NOSING ON LESS THEN 11” TREADS)

(NO MORE THEN 3/8” DIFFERENCE IN WIDTH)

