CITY OF PALO ALTO

DEVELOPMENT SERVICES – BUILDING INSPECTION

INSPECTION GUIDELINES: DECKS

INSPECTION CODE: 204, 228, 101

SCOPE: RESIDENTIAL

APPLICABLE CODES: 2016 CBC, CRC, CPC, CMC, CEC, CALGreen, CEnC, and PAMC

The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.

IMPORTANT

☐ For residential, multifamily, and commercial buildings, a permit is required for the construction, repair, replacement, relocation, addition or alteration of decks that are greater than 30" above finished grade, when attached to the building, requires steps, or is part of the required exit path from the building.

INSPECTIONS

FOUNDATIONS AND SETBACKS (INSPECTION 204)

☐ Verify the following per the drawings:

- Dimensions of the deck
- Footing/pier size and thickness (e.g., 18" x 18" x 12")
- Reinforcement (if required)
- Post brackets/anchorage (must be hot dipped galvanized (HDG) if using pressure-treated (PT) wood)

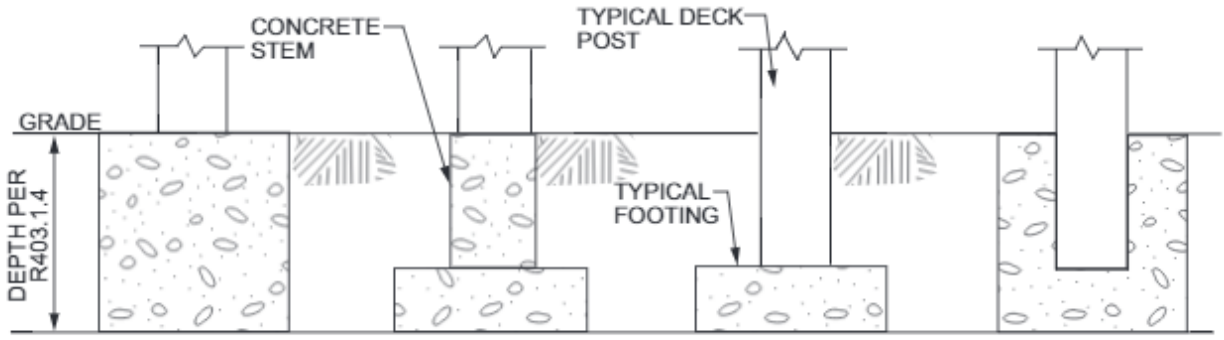


FIGURE R507.8.1
TYPICAL DECK POSTS TO DECK FOOTINGS

ROUGH FRAMING (INSPECTION 228)

WILDLAND URBAN INTERFACE (WUI)

☐ Decks on buildings west of 280 shall be made of ignition-resistant materials such as noncombustible materials and fire-retardant-treated wood. (CRC R337.4, CBC 704A, CBC 2302.2).

☐ The walking surface material of decks, porches, balconies, and stairs (when any portion is within 10' of the building) shall be constructed of (CRC R337.9.3, CBC 709A):

- Ignition-resistant materials that comply with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5.
- Exterior fire-retardant-treated wood
- Noncombustible material
- Any materials that comply with the performance requirements of SFM Standard 12-7A-4A when attached exterior wall covering is also either noncombustible or ignition-resistant material.

PROTECTION AGAINST WOOD DECAY AND PRESERVATIVE TREATED (PT) WOOD

☐ Wood framing members in contact with and are less than 8" from exposed earth, shall be naturally durable or preservative-treated wood. (CBC 2304.12.1.2, CRC R317.1(2))

☐ Fasteners for pressure treated wood and fire-retardant-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. (CBC 2304.10.5.1)

☐ Connectors that are used in exterior applications and in contact with preservative-treated wood shall have coating types and weights in accordance with the treated wood or connector manufacturer's recommendation and designed to resist lateral displacement. (CBC 2304.10.5.1, CRC R507.7.1)

- Joist hangers/post brackets/flashing (all hardware) shall be hot-dipped galvanized <u>or</u> Simpson's Zmax line. (Zmax and HDG are two separate coating options.)

☐ Ends of all pressure-treated lumber shall be treated with copper naphthenate (copper green), the concentration of which shall contain a minimum of 2% copper metal, by repeated brushing, dipping, or soaking until the wood absorbs no more preservative. (CRC R402.1.2)

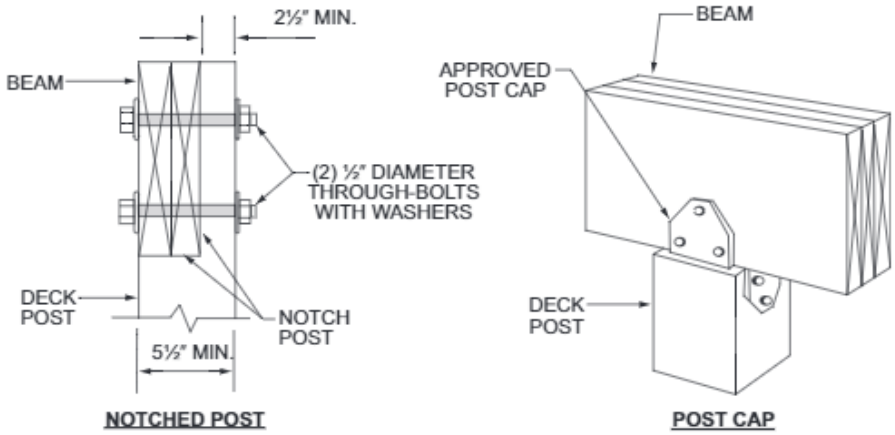


FIGURE R507.7.1
DECK BEAM TO DECK POST

FRAMING

☐ Verify that decks attached to exterior walls shall be positive anchored for vertical and lateral loads (see the figures below as examples); such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. (CRC R507.1)

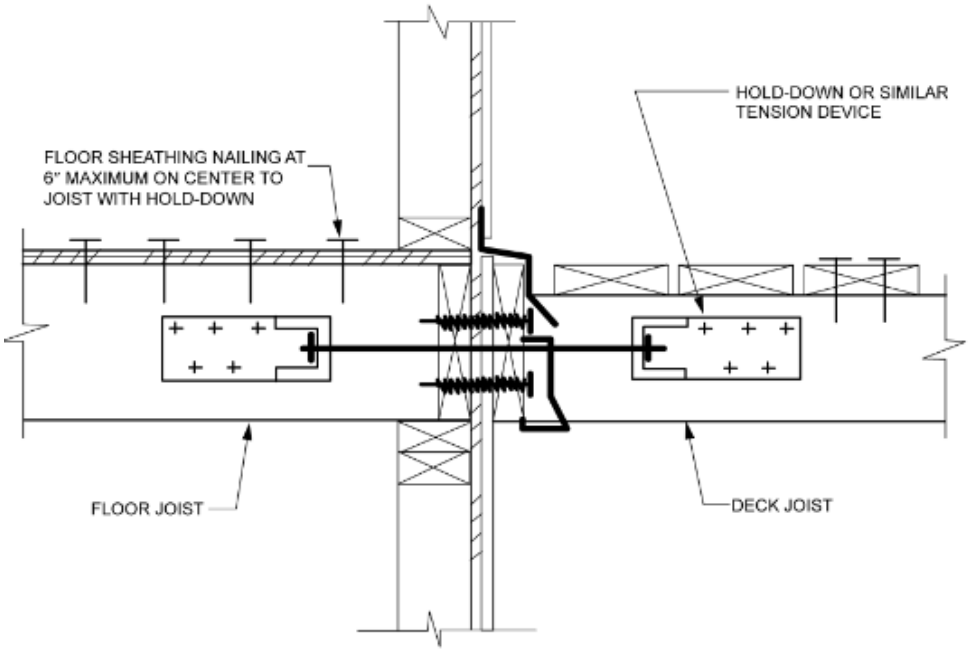


FIGURE 507.2.3(1)
DECK ATTACHMENT FOR LATERAL LOADS

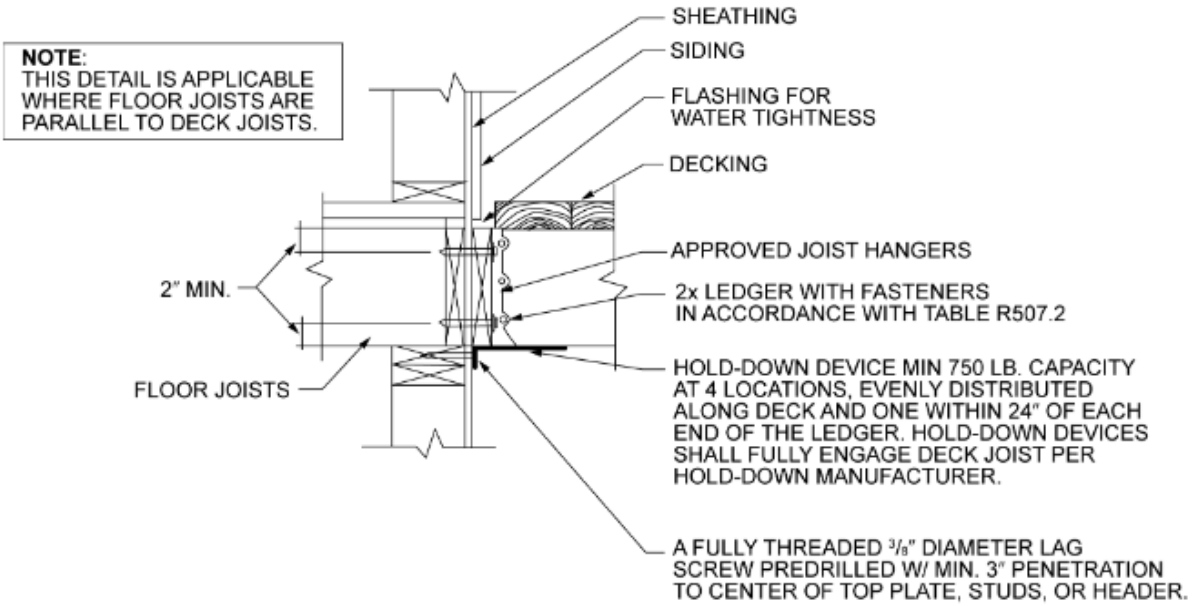


FIGURE R507.2.3(2)
DECK ATTACHMENT FOR LATERAL LOADS

- ☐ Verify deck ledger flashing and connection of posts and beams for gravity and lateral loads (CRC R507.7.1)

- ☐ If a spa is installed in the deck, verify that the drawings show it and the decking was engineered.

- ☐ Verify the size, material, span, spacing, and direction for posts, beams, joists, and decking.

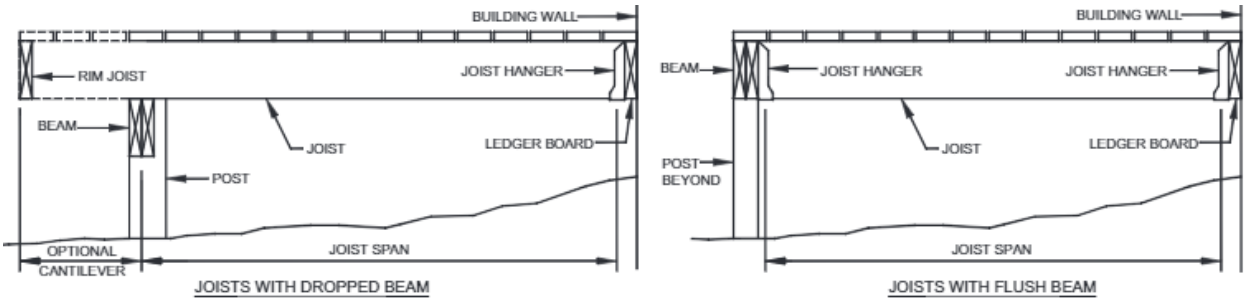


FIGURE R507.5
TYPICAL DECK JOIST SPANS

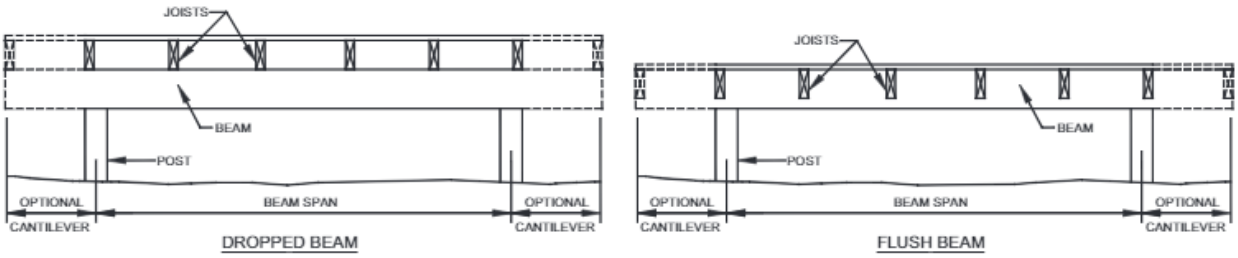


FIGURE R507.6
TYPICAL DECK BEAM SPANS

FINAL INSPECTION (INSPECTION 101)

DEBRIS

- ☐ Verify that all forms, stakes, wood debris, Sonotubes, etc., have been removed from under the floor area. (CRC R408.5)

LIGHTING

- ☐ Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway. (CRC R303.8)

SAFETY GLAZING

- ☐ If applicable, windows or doors shall be safety glazed due to the proximity of stairs or deck. (CRC R 308.4.2, CRC R308.4.3, CRC R308.4.6, CRC R308.4.7)

LANDINGS

- ☐ Every landing shall have a dimension of not less than 36” measure in the direction of travel and the slope shall not exceed 1/4 units vertical in 12 units horizontal. (CRC R311.3)

GUARDS, STAIRS, AND RAILS

- ☐ Refer to the “Handrails, Guards, and Stairs” inspection checklist for a full list of requirements.