

When do I need a Permit?

- Typically, decks less than 30" above grade accessory to a dwelling do not require a permit. They ARE, however, required to meet land use and zoning requirements.
- Building permits are required for all decks that are over 30" above grade at any point.
- Decks associated with new construction or modular homes do not need an additional permit provided:
 - Guardrails, handrails, and stairways meet code (see brochure *Guardrails & Handrails*)
 - All outside deck material is either pressure-treated wood or wood of natural resistance to decay (such as cedar or redwood)
- All covered decks need a permit.

Before You Design Your Deck

- Check with Ketchikan Gateway Borough Planning & Zoning to find your property's required setbacks. Setbacks from property lines vary depending on lot orientation to streets.
- If you live in Shoreline district area you will need to identify the exact location of the property's septic system components including all drainfield reserve areas.

Required Plan Information

A Plans Examiner first reviews your plans and identifies potential problems. If the plans are incomplete or incorrect, the plans examiner will request additional corrected information. To help the project go smoothly, plans must be complete and show as much information as possible. See the examples below to create the plans and drawings for your project. Your project submittal MUST include:

- Permit application;
- Site plan;
- Floor Plan
- Deck cross-sections that show all sides and include structural details;
- Stair and railing details; and

If the property is served by a well or onsite septic system, the plans must show that the deck will not encroach into the area served by the well and/or septic system.

Building Permit/ Plan Review Fees

Building permit / plan review fees are based on the project's completed valuation (material and labor). Incomplete submittals and re-inspections may require additional fees.

Minimum Required Plan Details

Remember, the more information shown on the plans, the more likely your project will be successful. Draw your deck's plans and details and submit two copies of the drawings. Plans do not need to be professionally drawn, but must include all of the information requested and be neat, legible, and drawn to scale.

1. Required **Site Plan** information (See Figure 1):

- Lot Dimensions;
- Location and size of existing structure(s);
- Location and size of the **proposed** structure;
- Setbacks from property lines of the existing and proposed structure(s).

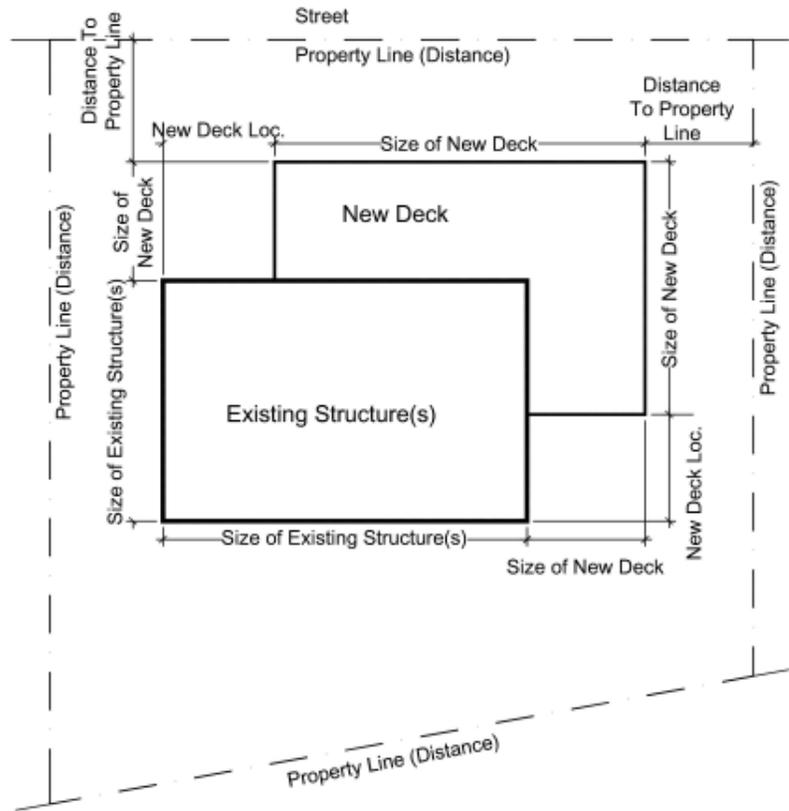


Figure 1: Site Plan

2. Required **Floor Plan** information (See Figure 2):

- Deck dimensions;
- Size and spacing of floor joists;
- Size of decking material;
- Size, location, and spacing of beams; and
- Type (both the grade and the species) of lumber

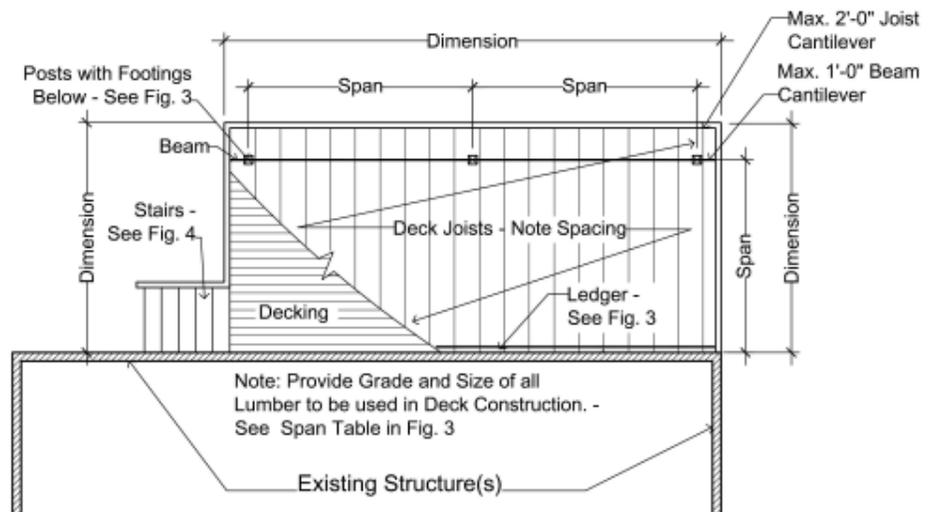


Figure 2: Floor Plan

3. Required **Elevations and Structural Details** (See Figure 3 for structural details and Figure 3.1 for Span Table/Footing Schedule):

- Height of structure from grade;
- Size and depth of footings;
- Method of attachment to the existing structure; and
- Flashing and connection details.

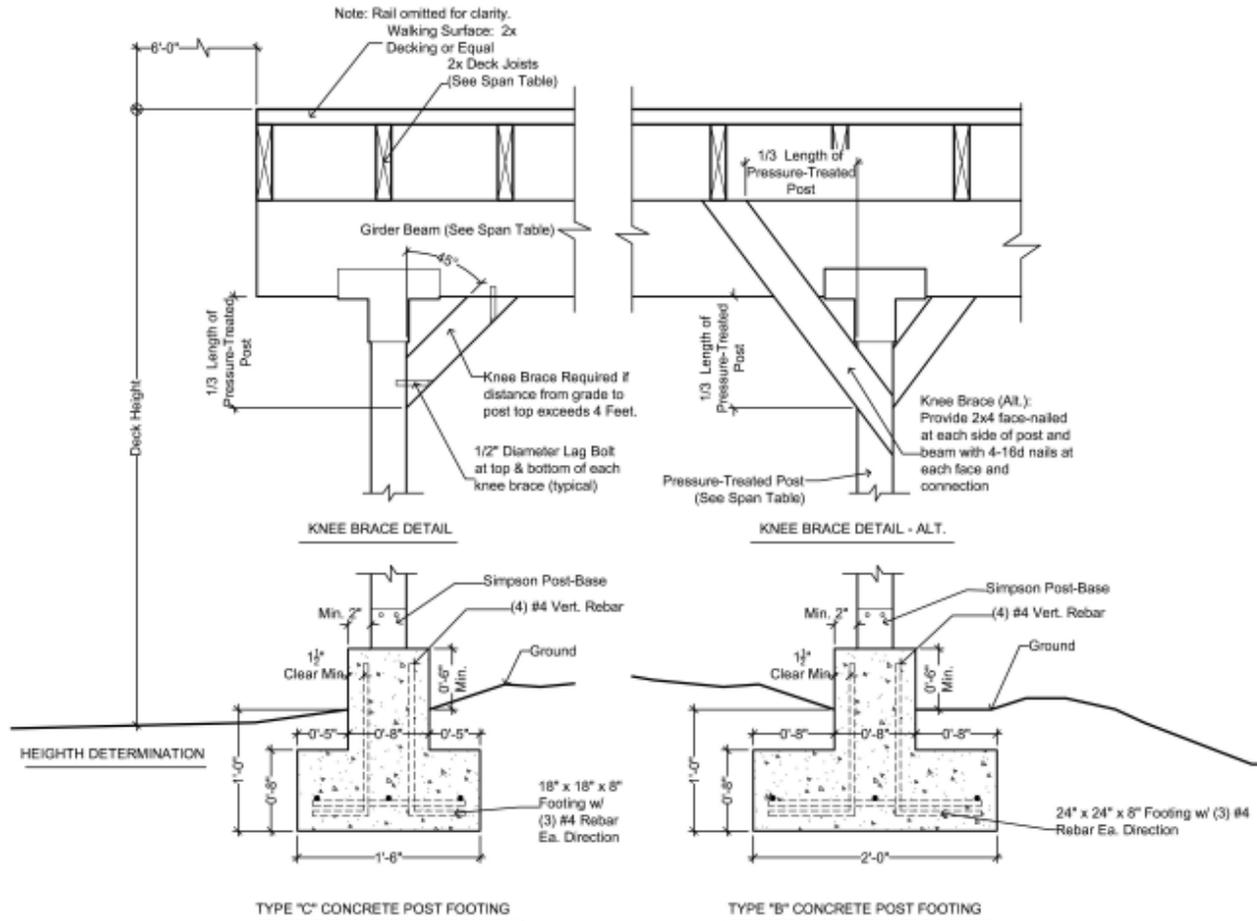


Figure 3: Footing and Knee Brace Details

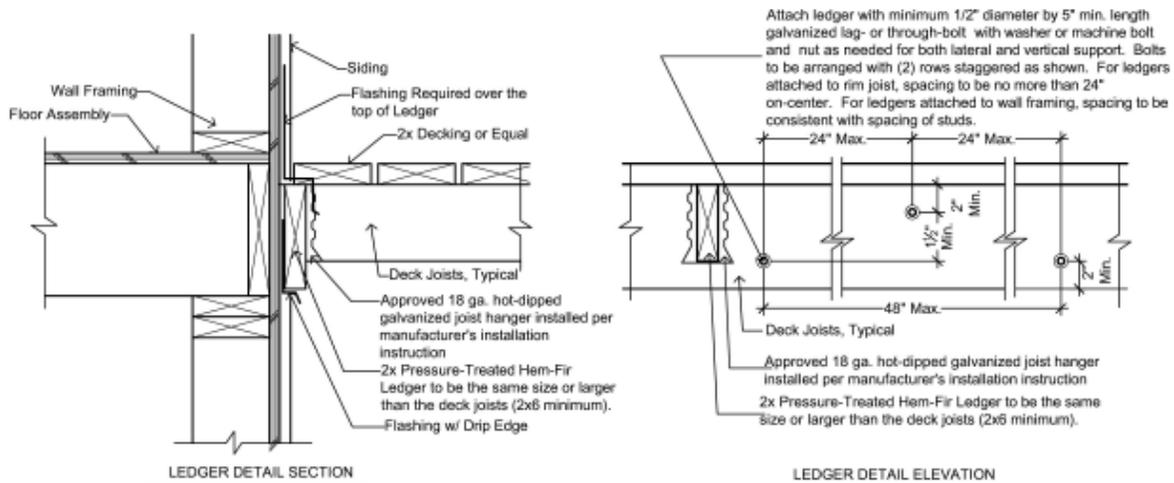


Figure 3: Connection Details

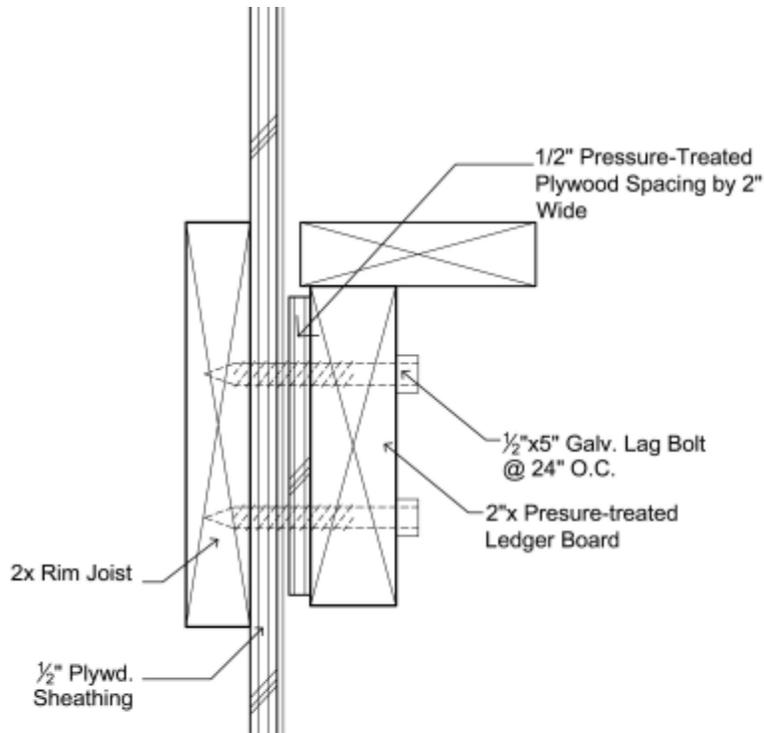


Figure 3: Alternate Connection Detail: 1/2" PT Plywood and 1/2" Drainage Spacers

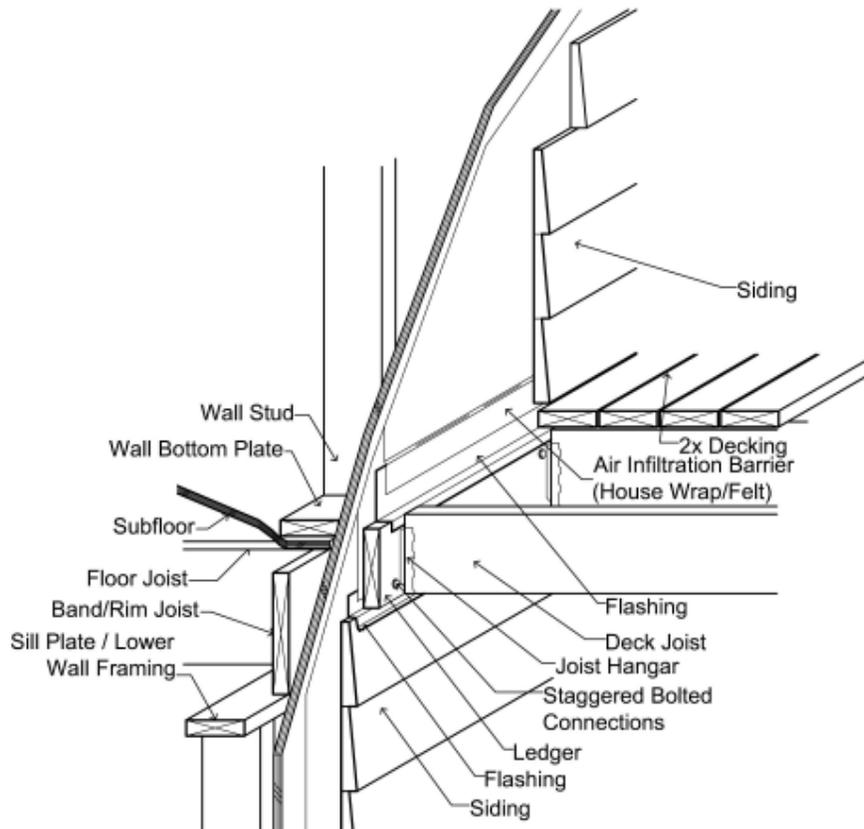


Figure 3: Deck Attachment Isometric

SPAN TABLE / FOOTING SCHEDULE FOR EXTERIOR RESIDENTIAL DECKS

(Figure 3.1)

Spans based on the use of Hem-Fir #2 or better lumber

Loading based on 10# dead load + 40# live load

Beam spans and footings assume a max. 24" overhang

| Joist Size | Joist Spacing | Span ft-in. | Girder Beam Spans (maximums between posts and footings, Typ.) | | | | | |
|------------|---------------|----------------|---------------------------------------------------------------|---------|-----|---------|------|---------|
| | | | 4x6 | Footing | 4x8 | Footing | 4x10 | Footing |
| 2x6 | 12" | 10'-0" | 6' | A | 8' | B | 10' | C |
| | 16" | 9'-1" | 6' | A | 8' | B | 10' | C |
| | 24" | 7'-11" | 7' | A | 9' | B | 11' | C |
| 2x8 | 12" | 13'-2" | 5' | B | 6' | B | 8' | C |
| | 16" | 12'-0" | 5' | B | 7' | B | 9' | C |
| | 24" | 10'-2" | 6' | B | 8' | B | 10' | C |
| 2x10 | 12" | 16'-10" | 4' | B | 5' | B | 7' | C |
| | 16" | 15'-2" | 5' | B | 6' | B | 8' | C |
| | 24" | 12'-5" | 5' | B | 7' | B | 9' | C |

FOOTING TYPES Note: All footings shall be a minimum of 12" below grade

| Type | Size | Reinforcement | Note |
|------|-------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| A | 12"x12"x18" | None | Pier blocks with positive connections and located 12" below grade may be substituted for type A footings. Not to be used on footings 48" above grade. |
| B | 18"x18"x8" | (3) - #4 Ea. Way | |
| C | 24"x24"x8" | (3) - #4 Ea. Way | |

4. Required **Stair, Guard, and Handrail Details** (See Figure 4):

- Guardrail height and spacing;
- Stairway rise/run;
- Stairway illumination source and controls.

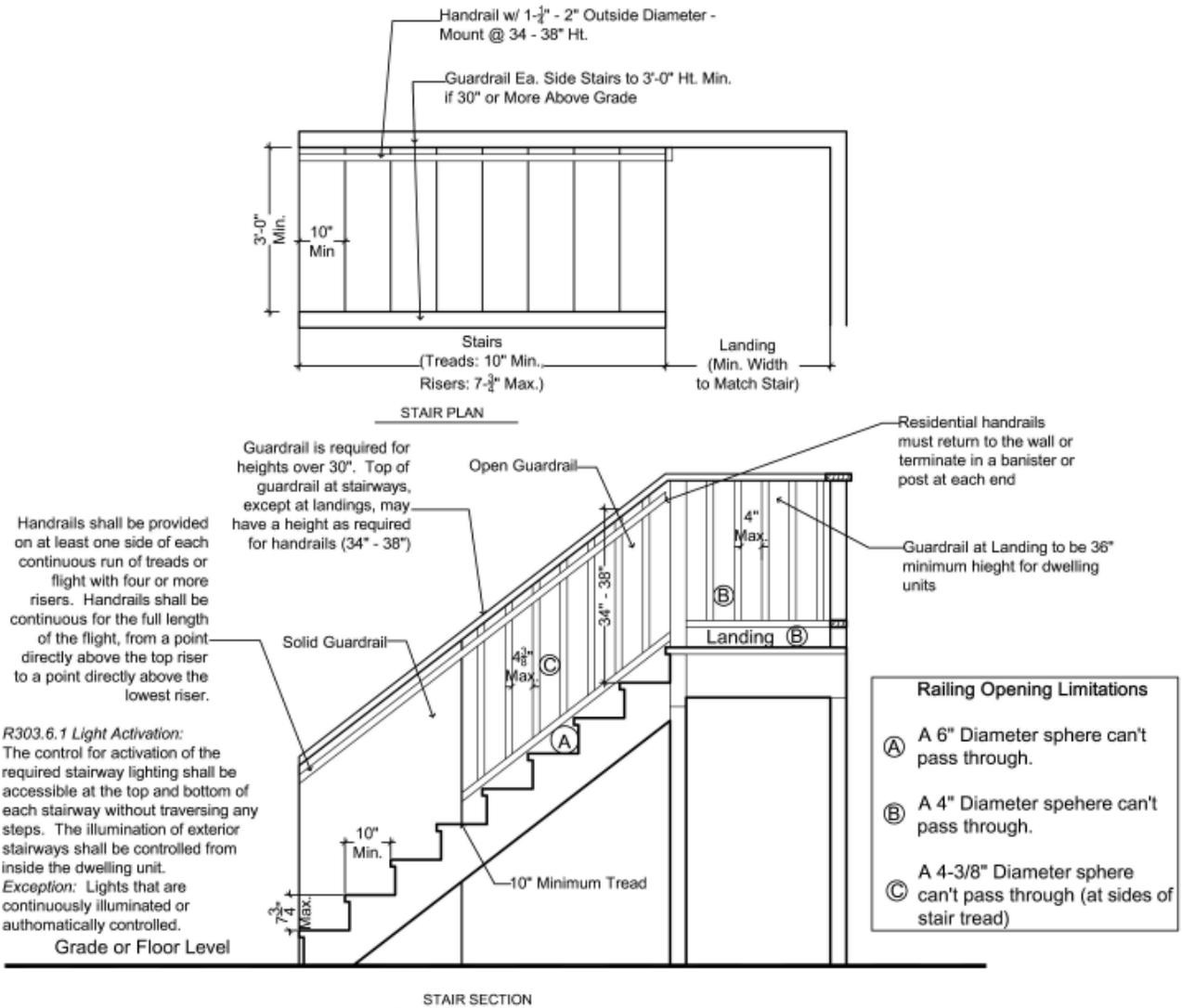
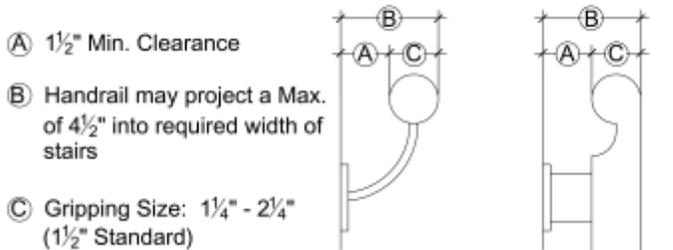


Figure 4: Stair Details



In multi-family and commercial buildings, verify handrail profile meets the requirements of Americans with Disabilities Act if located in an accessible area.

Figure 4: Handrail Details

Inspections

Inspectors visit the construction site during the project to make sure it complies with City of Ketchikan code requirements (See General Building Code Requirements, below). Most decks require up to three inspections – more if your project is complex. The inspector may conduct all inspections during one visit if s/he can observe all work done.

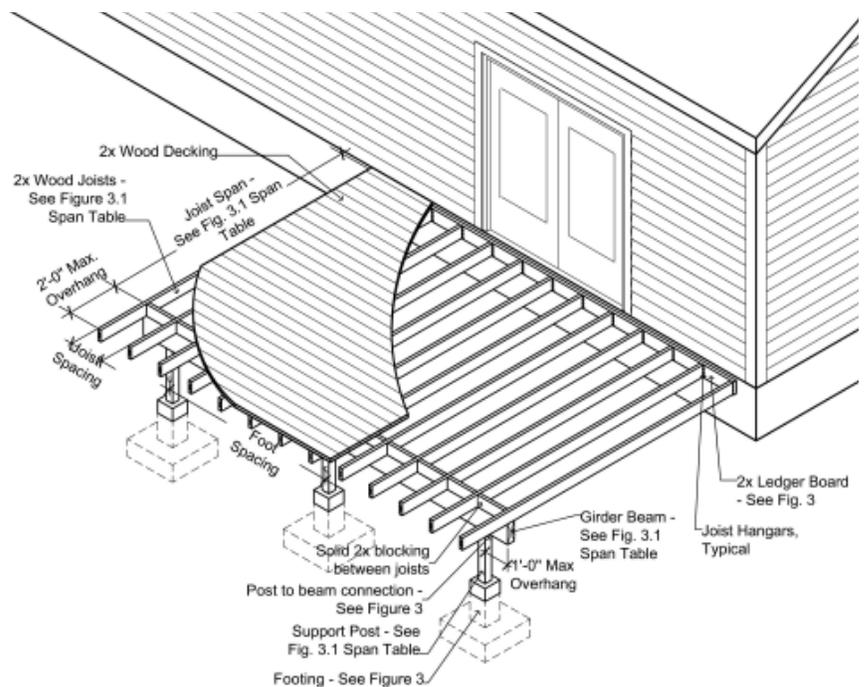
Your deck will be inspected for:

- Footings – Inspected after the holes are dug but prior to the pouring of concrete.
- Framing – inspected after all framing, blocking, and bracing are in place and prior to closing the construction so as to make it inaccessible for inspection. This inspection can be completed at the time of the final inspection if all parts of the framing will be visible and accessible at the final inspection.
- Final inspection to be made upon completion of the deck and finish grading.
- The inspector may make or require other inspections to ascertain compliance with the provisions of the code or to assist you with your questions or concerns during the construction process. Please call to schedule inspections.

General Building Code Requirements for Decks

See Figure 5.

1. The bottom of the footings must extend below grade a minimum of 12" (See Figure 3).
2. Residential decks need to be designed for a 40-pound-per square foot live load. All parts of the deck (including horizontal members such as beams, joists, ledger boards, and decking; and vertical members such as posts, poles, and columns) must be constructed of pressure-treated wood or approved wood with natural resistance to decay (such as redwood or cedar).
3. Columns and posts exposed to the weather or to water splash must be supported by and connected to concrete piers or metal pedestals projecting above grade. Columns and posts in contact with the ground must be of special pressure-treated wood approved for ground contact.
4. Decks should not overhang beams by more than two feet, nor should beams overhang posts by more than a foot at the ends unless a specific design is calculated. Floor joist



spacing at 24" on center requires 2x decking, and floor joist spacing at 16" on center allows 1x decking (See Figure 3).

5. All decks, balconies, porches, open sides of landings, and stairs which are more than 30" above grade or a floor below must be protected by a guardrail not less than 36" high (42" for commercial or common areas of multi-family dwellings). Open guardrails and stair railing require intermediate rails or an ornamental pattern such that a ball 4" in diameter cannot pass through (See Figure 4).
6. If a stairway is to be provided, it must be not less than 36" wide. Stairs may have a 7-3/4" maximum rise (height) and a 10" minimum run (length). The largest riser height and tread run may not exceed the smallest corresponding riser height or run by more than 3/8". Stair treads shall have nosing of at least 3/4" but not more than 1-1/4" unless the treads are 11" or more. The radius of curvature at the leading edge of the tread shall be no greater than 9/16" (See Figure 4).
7. Handrails are required on all stairways having four or more risers. Handrails may not be less than 1.25" nor more than 2" in cross-sectional area (diameter). Handrails must be installed not less than 34" nor more than 38" above the nosing (front edge) of treads and they must be returned to a wall or post at the ends (See Figure 4).
8. Deck stairs (exterior stairways) shall be provided with a source of illumination at the top landing, controlled from within the dwelling or by automatic means (See Figure 4).