THERE ARE THREE INSPECTIONS REQUIRED WHEN BUILDING A DECK:

1. POST HOLE – 36” TO 42” DEEP

2. DECK JOISTS – BEFORE DECK FLOORING IS INSTALLED

3. FINAL – ONCE DECK IS COMPLETED IN ITS ENTIRETY

PLEASE CALL THE CITY OF HOBART BUILDING DEPARTMENT AT 219-942-1722, AT LEAST THE DAY BEFORE YOU NEED AN INSPECTION. BE SURE TO HAVE YOUR PERMIT NUMBER AND THE PROPERTY ADDRESS WHEN CALLING.
Stair requirements under the 2006 International Residential Code. See IRC sections R311 and R312.

NOTE: All exterior deck and stair wood must be factory pressure-treated or cedar or redwood.

Riser Height

Tread - Minimum 10" Newel Post

Floor or Grade (Ground Level)

Sloping Plane across Nosings

Min. 34" front nosing at open stairs

GrippySideHandrail (Required on one side of stairs with 4 or more Risers)

Newel Post

Elevation or Side View

NOTE: 3 feet Landings required at top and bottom. Except at top of risers, where floor deck must extend past open stairs.

Elevation or Side View

Handrails must return to wall or end at post - No projecting ends

Plan or Top View

New!

1-1/4" to 1-1/2" Nosings Required unless Open Risers or over 11" Treads

Solid Risers or "Open Risers" with less than 4" Open Space

New!

Handrail to Wall or Post Min 1 3/4"
HOBART IRC 2006 FOR RESIDENTIAL DECKS

IRC "R311.5.6.3 Handrail grip size. All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches (32mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 1 1/4 inches (160 mm) with a maximum cross section of dimension of 2 1/4 inches (57 mm).

2. Type II. Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3 1/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5 1/8 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 1 3/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4 inches (32 mm) to a maximum of 2 3/4 inches (70mm). Edges shall have a minimum radius of 0.01 inches (0.25 mm)." [ADA requires minimum 1 1/8" and maximum 1 1/2" dimensions on handrails.]

Examples of Unacceptable Handrails

Additional Handrail Code Information

"R311.5.6.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm)."

"R311.5.6.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch (38 mm) between the wall and the handrails." [ADA requires exactly 1 1/2" from wall.]
SPAN TABLES

These span tables are specifically for hem-fir pressure treated lumber (#2 and better). Hem-fir is the primary material used for outdoor deck framing in the Pacific Northwest and Alaska. It is recommended that 2x4 or 2x6 decking be used with these tables.

For a solid feeling deck, with little or no bounce, avoid using the maximum distances allowed for in the tables. Decks over 6 feet high require joist spacing no greater than 16 inches on-center for a solid feeling deck. 2x6 joists are for low level decks only.

HOW TO USE THE TABLES

A 10x16 foot deck with a 2 foot cantilever has a joist span of 8 feet. The Maximum Joist Spans chart shows that either 2x6 joists with 16 inch spacing or 2x8 joists with 24 inch spacing can span the 8 feet.

According to the Maximum Beam Spans chart, joist spans of 8 feet require at least a 4x8 beam with posts no farther apart than 6 feet. Dividing the length of the deck (16 feet) by the 6 foot maximum beam span shows 2.66 spans required. Rounding 2.66 spans up to 3 spans means a total of 4 posts are needed.

The end posts should be set in a little from the ends of the beam. Spacing the 4 posts apart 4 feet 9 inches on-center gives just about a foot of beam overhang on each side.

For the maximum post height multiply the joist span by the beam span: 8'x4'9"=38 square feet. As long as the deck is not over 12 feet high, 4x4 posts can safely be used.
R312.1.2 Landings at doors. There shall be a floor or landing on each side of every exterior door.

Exception: At the exterior side of sliding doors.

The floor or landing at a door shall not be more than 1.5 inches (38 mm) lower than the top of the threshold.

Exception: The landing at an exterior doorway shall not be more than 8 inches (197 mm) below the top of the threshold, provided that the door, other than an exterior storm or screen door, does not swing over the landing.

R312.2 Size. The width of each landing shall not be less than the stairway or door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel.

SECTION R313 RAMPS

R313.1 Maximum slope. RAMPS SHALL HAVE A MAXIMUM SLOPE OF ONE UNIT VERTICAL IN EIGHT UNITS HORIZONTAL (12.5-PERCENT SLOPE).

R313.2 Handrails required. Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R313.3 Landing required. A minimum 3-foot-by-3-foot (914 mm by 914 mm) landing shall be provided:
1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.

SECTION R314 STAIRWAYS

R314.1 Width. Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31.5 inches (797 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R314.5.

R314.2 Treads and risers. The maximum riser height shall be 7 1/4 inches (196 mm) and the minimum tread depth shall be 10 inches (254 mm). The riser height shall be measured vertically between leading edges of the adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The walking surface of treads and landings of a stairway shall be sloped no steeper than one unit vertical in 48 units horizontal (2-percent slope). The greatest riser height within any flight of stairs shall not exceed the smallest by more than 9/16 inch (9.5 mm). The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 9/16 inch (9.5 mm).

R314.2.1 Profile. The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch (14.3 mm). A nosing not less than 3/4 inch (19.1 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch (12.7 mm). Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch-diameter (102 mm) sphere.

Exceptions:
1. A nosing is not required where the tread depth is a minimum of 11 inches (279 mm).
2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

R314.3 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet, 8 inches (2032 mm) measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.

R314.4 Winders. Winders are permitted, provided that the width of the tread at a point not more than 12 inches (305 mm) from the side where the treads are narrower is not less than 10 inches (254 mm) and the minimum width of any tread is not less than 6 inches (152 mm). The continuous handrail required by Section R315.1 shall be located on the side where the tread is narrower.

R314.5 Spiral stairs. Spiral stairways are permitted, provided the minimum width shall be 26 inches (660 mm) with each riser having a 7 1/2-inch (190 mm) minimum tread width at 12 inches (305 mm) from the narrow edge. All treads shall be identical, and the rise shall be no more than 9 1/2 inches (241 mm). A minimum headroom of 6 feet, 6 inches (1982 mm) shall be provided.

R314.6 Circular stairways. Circular stairways shall have a tread depth at a point not more than 12 inches (305 mm) from the side where the treads are narrower of not less than 11 inches (279 mm) and the minimum depth of any tread shall be not less than 6 inches (152 mm). Tread depth at any walking line, measured a consistent distance from a side of the stairway, shall be uniform as specified in Section R314.2.

R314.7 Illumination. All stairs shall be provided with illumination in accordance with Section R303.4.

R314.8 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2 inch (12.7 mm) gypsum board.

R314.9 Bulkhead enclosure stairways. Stairways servant bulkhead enclosures not part of the required building egress, and providing access from the outside grade level to the basement shall be exempt from the requirements of Sections R312,
required for emergency escape shall have horizontal dimensions that allow the door or window of the emergency escape opening to be fully opened.

(g) Delete in SECTION R310.2.1 “below the adjacent ground level”.

(h) Delete in two (2) places in SECTION R310.4 “and rescue”.

(i) Add SECTION R310.5 to read as follows: R310.5 Sleeping room replacement window alterations. When replacing existing sleeping room windows, at least one (1) of the replacement windows shall comply with SECTION R310.5. Replacement windows that do not meet the current emergency escape requirements of SECTION R310, without structural alterations to the dwelling, may be installed as long as they meet the following requirements.

1. Replacement window installation shall not reduce the existing net clear opening by more than six (6) inches horizontally and six (6) inches vertically, except that awning replacement windows shall not reduce the existing net clear opening by more than three (3) inches vertically.

2. In no case shall the replacement window net clear opening height be less than twenty-two (22) inches (five hundred fifty-nine (559) millimeters) and the net clear opening width be less than twenty (20) inches (five hundred eighty (588) millimeters).

3. Double hung or sliding replacement windows shall have both sashes removable without the use of a key or tool. Single hung installations are not allowed by this SECTION.

4. Casement and awning replacement windows may obtain the required net clear opening with the use of egress hardware.

5. If the replacement window cannot meet the minimum requirements listed in subdivisions 1, 2, 3, and 4, the existing window shall be replaced with a like window without reducing the existing net clear opening.

(675 IAC 14-4.2-22) Eff June 22, 2001

SECTION R311.2; type of lock or latch

Sec. 23. Delete “egress” between “all” and “doors” and delete “or special knowledge or effort” from SECTION R311.2. (675 IAC 14-4.2-23) Eff June 22, 2001

SECTION R311.5; exit facilities

Sec. 24. Delete SECTION R311.5. (675 IAC 14-4.2-24) Eff June 22, 2001

SECTION R312.1, SECTION R312.1.1 and SECTION R312.1.2; general, landings for stairways and landings for doors

Sec. 25. (a) Delete the text and SECTION numbers of SECTIONS R312.1, R312.1.1, and R312.1.2 and substitute to read as follows: (a) Add SECTION R312.1 to read as follows:

R312.1 Landings. There shall be a floor or landing at the top and bottom of each stairway.

EXCEPTION: At the top of an interior flight of stairs, provided the door does not swing over the stairs.

(b) Add SECTION R312.1.1 to read as follows: R312.1.1 Required exit. There shall be a floor or landing on each side of the required exit door and the landing shall comply with SECTION R312.2.

(c) Add SECTION R312.1.2 to read as follows: R312.1.2 Other exterior doors (nonrequired exits). Exterior doors, other than the required exit that requires three (3) or more risers, shall be provided with landings and steps as required by FIGURE R312, or guards, or ramps.

Exterior doors, other than the required exit that require two (2) or fewer risers, shall be provided with an intermediate tread with a width of not less than eleven and one-fourth (11 1/4) inches (two hundred eighty-six (286) millimeters) as required by FIGURE R312 or be provided with a landing as stated in SECTION R312.2.

(d) Add SECTION R312.1.3 to read as follows: R312.1.3 Landings at doors. The floor or landing at a door shall not be more than one and one-half (1 1/2) inches (one hundred ninety-two (192) millimeters) lower than the top of the threshold.

EXCEPTION: The landing at an exterior doorway shall not be more than eight and one-fourth (8 1/4) inches (one hundred ninety-seven (197) millimeters) below the top of the threshold, provided that the door, other than an exterior storm or screen door does not swing over the landing.

(e) Add FIGURE R312 at the end of SECTION
THERE SHALL BE A 3-FOOT BY 3-FOOT LANDING SPACE ON EACH SIDE OF THE REQUIRED EGRESS DOOR.

INTERIOR FLIGHT OF STAIRS

DOOR SWING

LANDINGS
Sec. R-212
REQUIRED EGRESS DOOR
SIDE-HINGED
MIN. 3 FT. IN WIDTH
MIN. 6'-8" IN HEIGHT

3'-0" x 3'-0"
MINIMUM
LANDING
EACH SIDE

NOTE: THE MINIMUM WIDTH OF A HALLWAY SERVING THE REQUIRED EGRESS DOOR SHALL BE NOT LESS THAN THREE FEET

DOORS, HALLWAYS, & LANDINGS
Sec. R-210.1 & R-212