



City of Urbandale  
3600 86<sup>th</sup> Street  
Urbandale, IA 50322-4057

Building Department (515) 278-3930  
Fax No. (515) 278-3927

## **Deck Plan Review and Inspection Schedule**

Code requirements relative to decks are not extensive, however a few items need to be pointed out.

- A minimum of one smoke detector must be installed in the area giving access to the bedrooms. If permitted work exceeds \$1,000 valuation, smoke detectors are also required in every bedroom, and on every level. These new detectors can be battery operated. Of course decks and bedrooms are usually unrelated, however it is mandated both by state law and the International Building Code, and is a part of a nationwide effort to improve home safety from fires.
- Structurally, the design must be reviewed by the Building Department. Your deck plan should have dimensions, show joist size and spacing, show beam size and location, show number of support columns and size of footings.
- The footings must extend 42" minimum below grade. Generally, 12" diameter column footings are adequate but larger footings are often required due to greater loads being imposed over interior supports. If a porch is intended to go upon the deck, the combined roof and floor load often requires 18" diameter or larger footings.
- If the deck is attached to the house, it must be securely attached with lags, through bolts or other approved fasteners to the house, and diagonal bracing to prevent racking is needed. Connection fasteners must be positioned to minimize damage to the rim joist.
- Wood deck material must be a species with natural resistance to decay such as cedar or redwood, or treated wood. In 2004 CCA treated wood was no longer available, and so most likely Alkaline Copper Quaternary (ACQ) will be supplied. ACQ causes rapid corrosion to many varieties of connectors, so stainless steel connectors and fasteners are recommended. Examples of connectors are joist-hangers, and fasteners are items such as nails. Simpson's ZMAX (or equal) heavily galvanized connectors are acceptable, however stainless steel is preferred. Economy grades of galvanization are unacceptable, and corrosion will occur.
- If the deck floor surface is 30" or more above grade, the deck must have a guard around it. The guard must not have openings in it greater than 4" and must at least be 36" tall. The guard must be securely attached to the rim joist with deck screws or bolts, and if ACQ wood is used, stainless steel connectors should be used.
- Stair handrails must be grippable as detailed on the handrail sheet attached. A 2" x4" or 2"x6" is not acceptable unless it is mounted on edge with a finger grip routed out on the backside.
- Decks normally must be the same distance from the property lines (called "setback") that the house is required to be. For specific setback requirements for your property please contact the Zoning Administrator at (515) 278-3935.
- **Before you dig:** Call "One Call" for utility locations before you begin digging, at 1-800-292-8989. Utility locations are typically completed within 48 hours of your request. Underground utility location prior to digging is required by state law. This service is free of charge.

## **Required Inspections**

1. **Footings/Setback Inspection** before the footings are poured. Lot Pins should be located at this time to verify setbacks.
2. **Framing Inspection** before the floor is installed if the deck is too close to the ground for framing to be observed at Final.
3. **Final Inspection**

**All required handrails should be of one of the following types or provide equivalent graspability.**

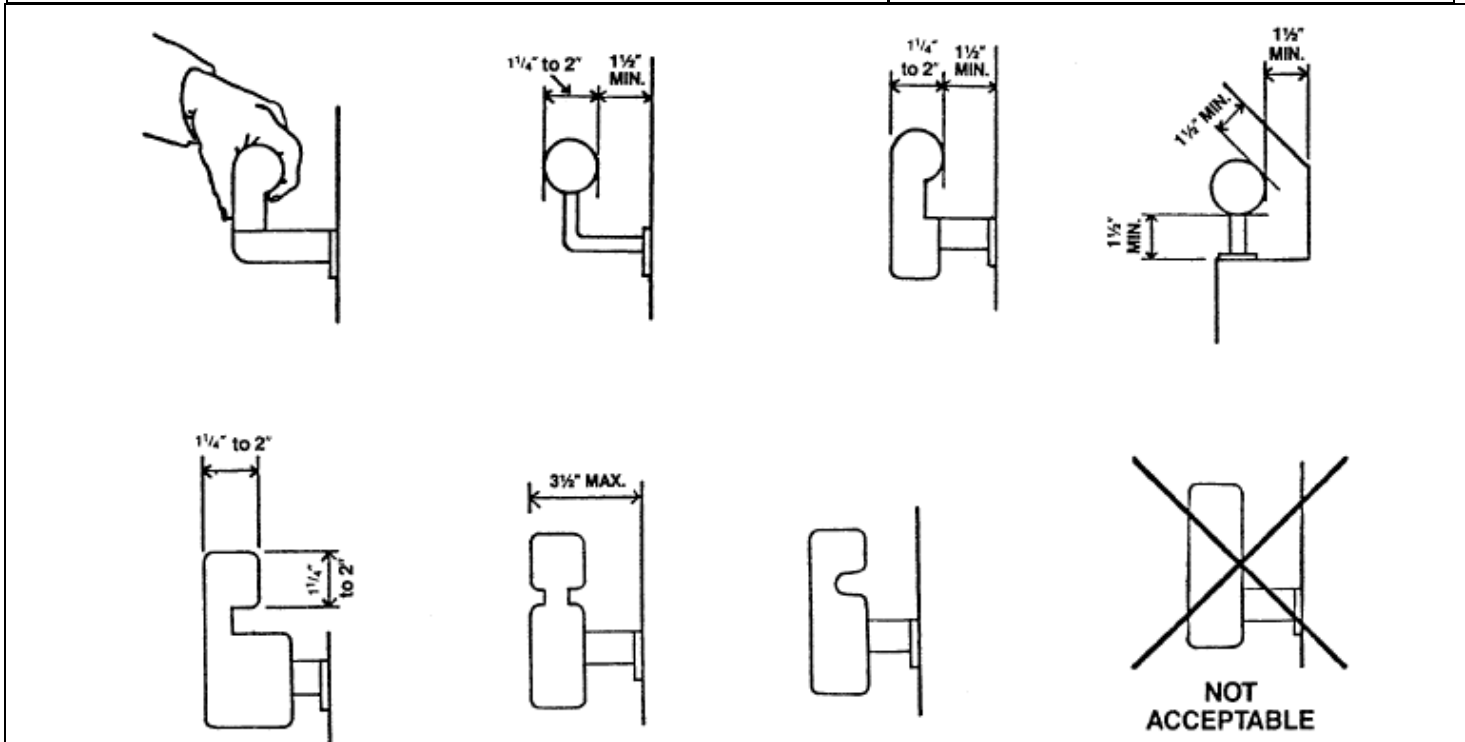
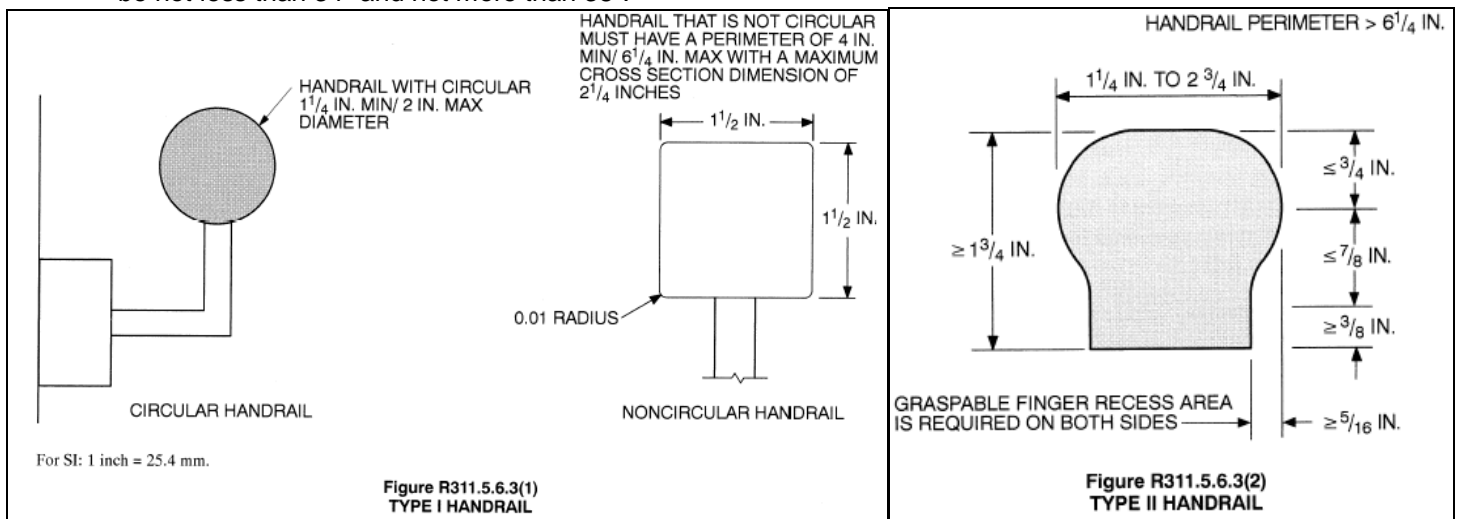
**Type I.**

Handrails with a circular cross section should have an outside diameter of at least 1 1/4 inches and not greater than 2 inches. If the handrail is not circular it should have a perimeter dimension of at least 4 inches and not greater than 6 1/4 inches with a maximum cross section dimension of 2 1/4 inches.

**Type II.**

Handrails with a perimeter greater than 6 1/4 inches should provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch within 7/8 inch ) below the widest portion of the profile. This required depth should continue for at least 3/8 inch to a level that is not less than 1 3/4 inches below the tallest portion of the profile. The minimum width of the handrail above the recess should be 1 1/4 inches to a maximum of 2 3/4 inches. Edges should have a minimum radius of 0.01 inches

**Note:** Handrail height is measured vertically from the sloped plane adjoining the tread nosing and should be not less than 34" and not more than 38".



NOTE: Other shapes may be acceptable if they provide an equivalent gripping service.