



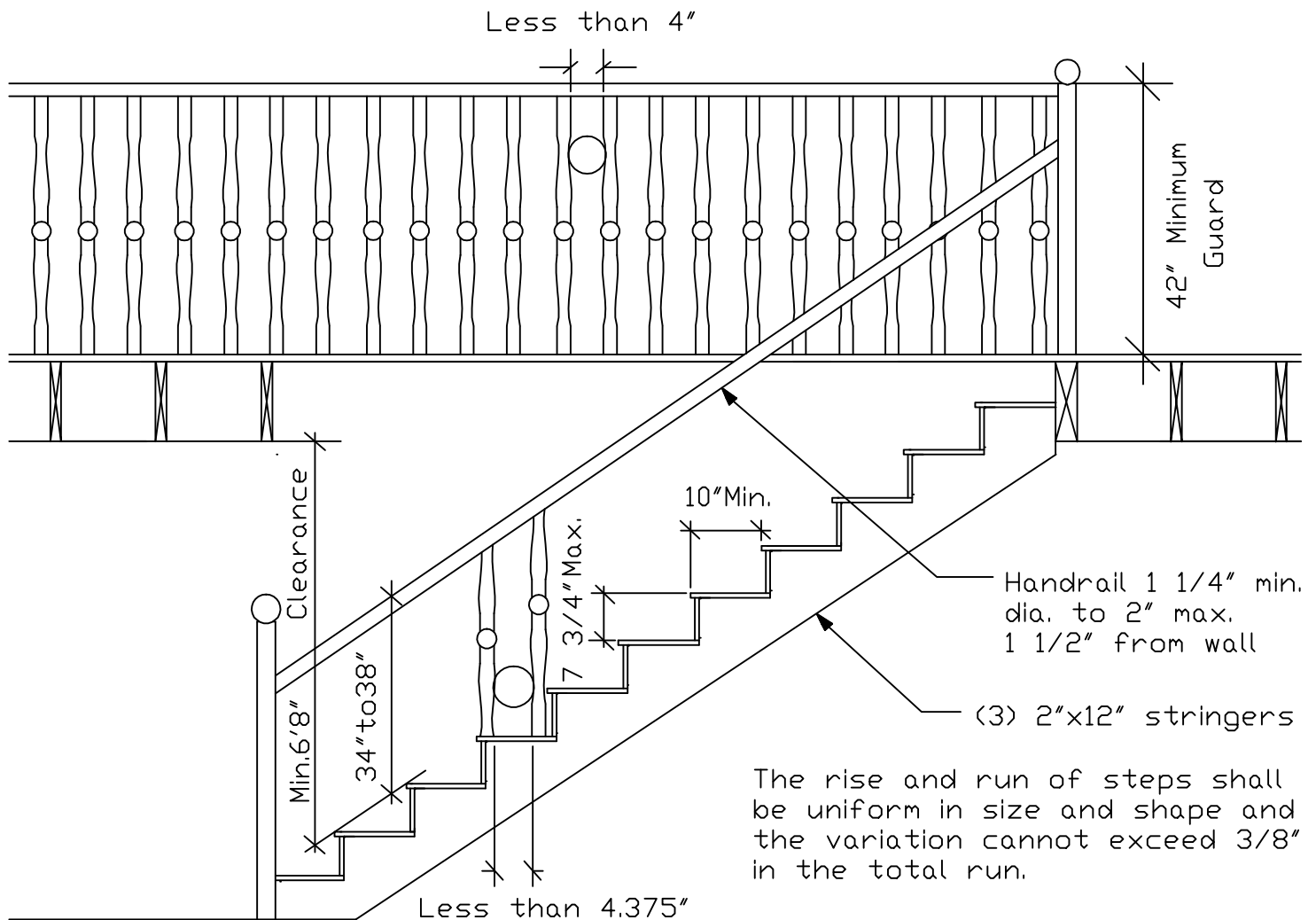
RESIDENTIAL STAIRWAY AND HANDRAIL REQUIREMENTS

The following information is based on the 2007 California Building Code (CBC)

- * The rise and run of steps shall be uniform in size, shape, and the variation cannot exceed 3/8 inch in the total run per CBC Section 1009.3.2.
- * The maximum rise of steps shall be 7 3/4 inches; the minimum tread depth shall be 10 inches. The minimum winder tread depth at the walk line shall be 10 inches; and the minimum winder tread depth shall be 6 inches. A nosing not less than 3/4 inch but not greater than 1 1/4 inches shall be provided on stairways with solid risers where the tread depth is less than 11 inches per CBC Section 1009.3(4).
- * Stairways shall have a minimum headroom clearance of 80 inches measured vertically from a line connecting the edge of the nosing. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing per CBC Section 1009.2.
- * The minimum width of stairways shall not be less than 36 inches. The minimum dimension of all landings shall be 36 inches per CBC Sections 1009.1(1) and 1009.4.
- * All stairs having four or more risers are required to have handrails and guardrails that comply with the CBC Sections 1012 and 1013.
- * All landings, decks, and balconies that are more than 30 inches above grade require a building permit and guardrails that comply with all applicable CBC provisions.
- * The mounting of handrails shall be such that the completed handrail and supporting structure are capable of withstanding a load of at least 200 pounds applied in any direction at any point along the top of the rail per CBC Section 1012.1, 1607.7.1(1), and 1607.7.1.1.
- * Handrails shall be continuous the full length of the stairs, from the top riser to the bottom per CBC Section 1012.5(1).
- * Handrails are only permitted to be interrupted by a newel post at a landing per CBC Section 1012.4(1).
- * Handrail height, measured above the stair tread nosing, shall be uniform, not less than 34 inches and not more than 38 inches per CBC Section 1012.2.
- * Handrails with a circular cross-section shall have an outside diameter of at least 1 1/4 inches and not greater than 2 inches or shall provide equivalent grasp ability. If the handrail is not circular it shall 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. Edges shall have a minimum radius of 0.01 inch per CBC Section 1012.3.
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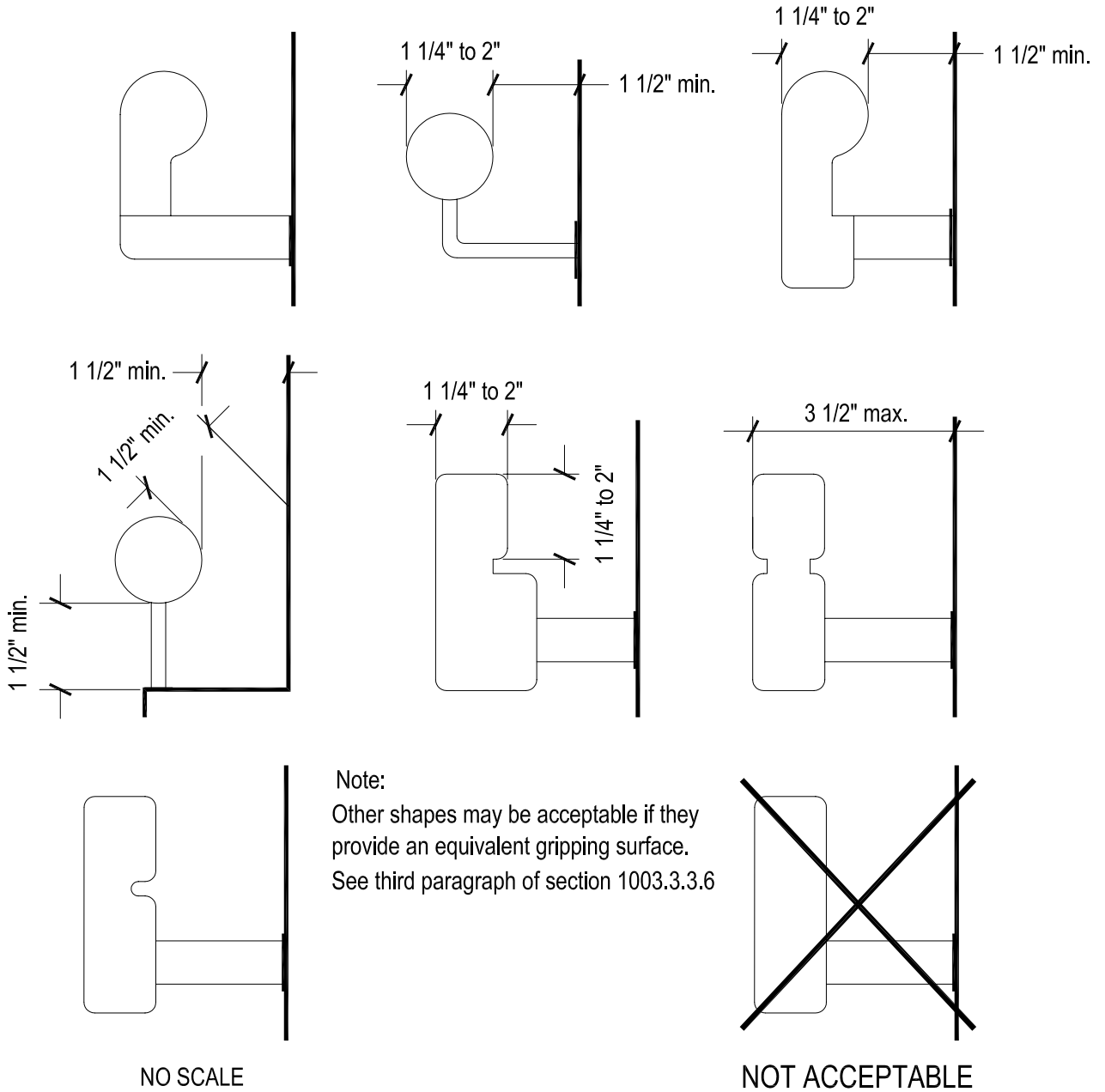
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- * Handrail ends shall be returned to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight. The termination point may also be a newel post per CBC Section 1012.5.
- * Handrails shall have a clear space between the handrail and a wall or other surface of at least 1 1/2 inches. A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp object or abrasive elements per CBC Section 1012.6.
- * Projections into the required width of stairways at each handrail shall not exceed 4 1/2 inches at or below the handrail height per CBC Section 1012.7.
- * On the open side of the stairs, intermediate railings shall be provided and installed so that a 4.375 inch sphere cannot pass through per CBC Section 1013.3(5).

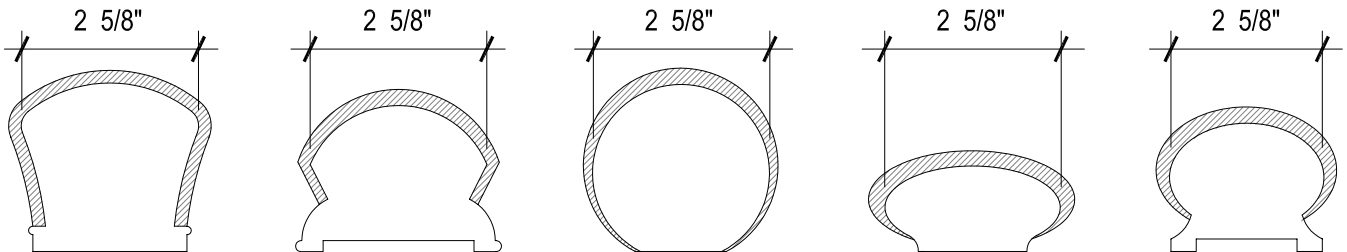


ACCEPTABLE SHAPES AND INSTALLATIONS OF HANDRAILS

For Single - Family Residential Dwellings



Equivalent Gripping Surface



All of the following must be met :

1. Maximum cross-section dimension 2 5/8"
2. Maximum gripping surface 4 1/2" (shaded area)
3. Maximum cross - section 1 1/4"