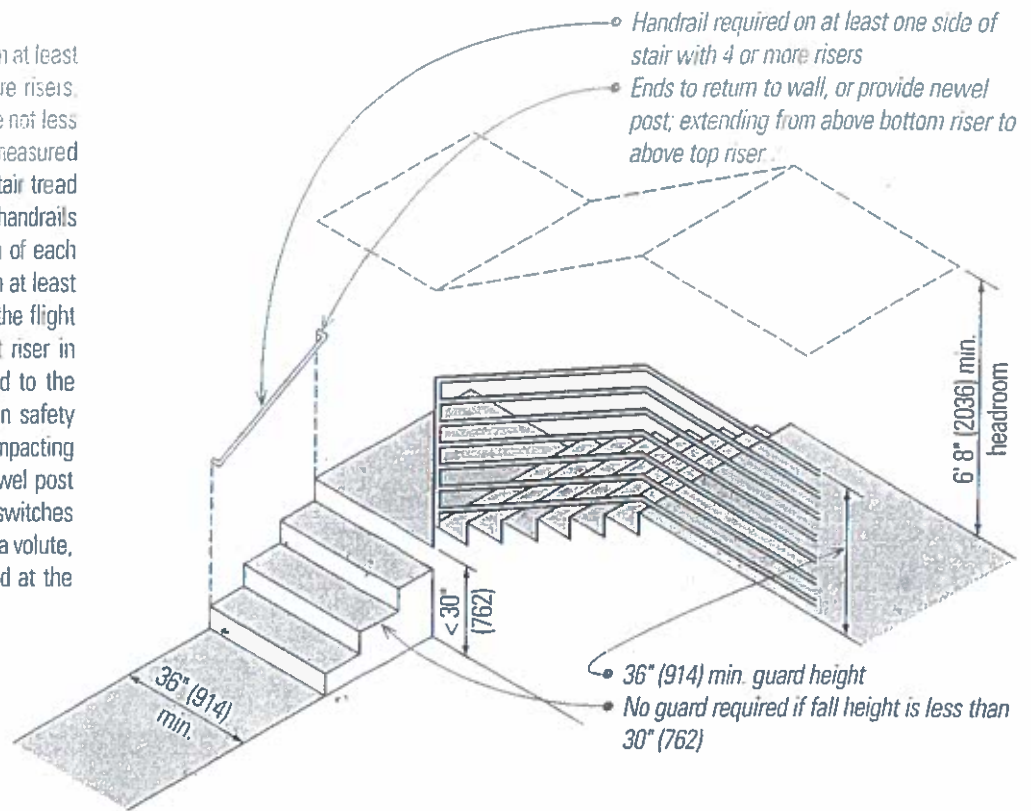


*Red*

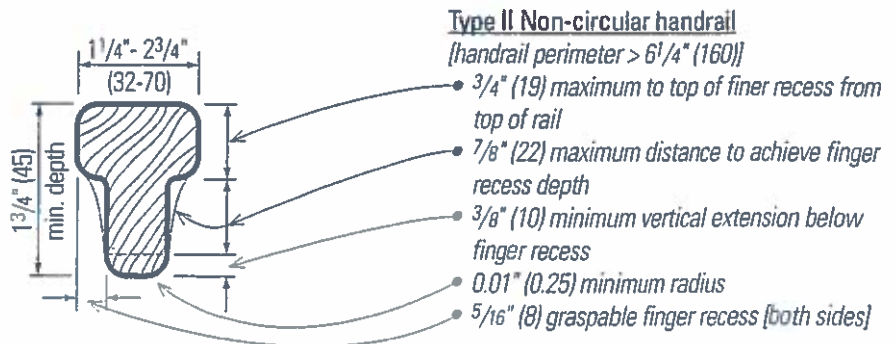
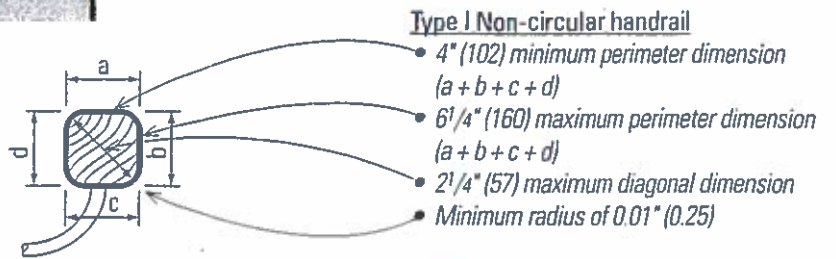
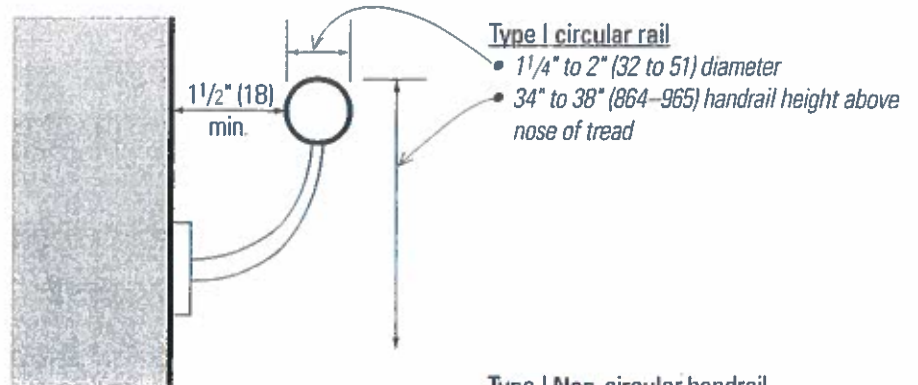
**City of Davenport, Iowa**  
**Residential (One and Two Family Dwelling)**  
**Stair and Handrail Guide**  
**2009 International Residential Code**

**Means of Egress**

Handrails at stairs are to be provided on at least one side of any stair with four or more risers. The handrail for stairs or ramps is to be not less than 34" (864) or more than 38" (965) measured vertically from a plane adjoining the stair tread nosings or the ramp surface. Stair handrails are to be continuous for the full length of each flight of stairs. They are to extend from at least a point directly above the top riser in the flight and a point directly above the lowest riser in the flight. The rails are to be returned to the wall or terminate in newel posts or in safety terminals to protect stair users from impacting the unprotected ends of the rail. A newel post may be used at the turn in a stair that switches back and a decorative element such as a volute, turnout, or starting easing may be used at the lowest tread in a flight of stairs.



The rail is to have a handgrip clearance of 1 1/2" (38) between adjacent walls and the handrail. Stair handrails are a safety feature for stairs, allowing occupants to maintain stability in using them. Therefore the handrails are to be graspable. Various configurations are allowed, divided into regular-shaped Type I rails, and irregular-shaped Type II rails.

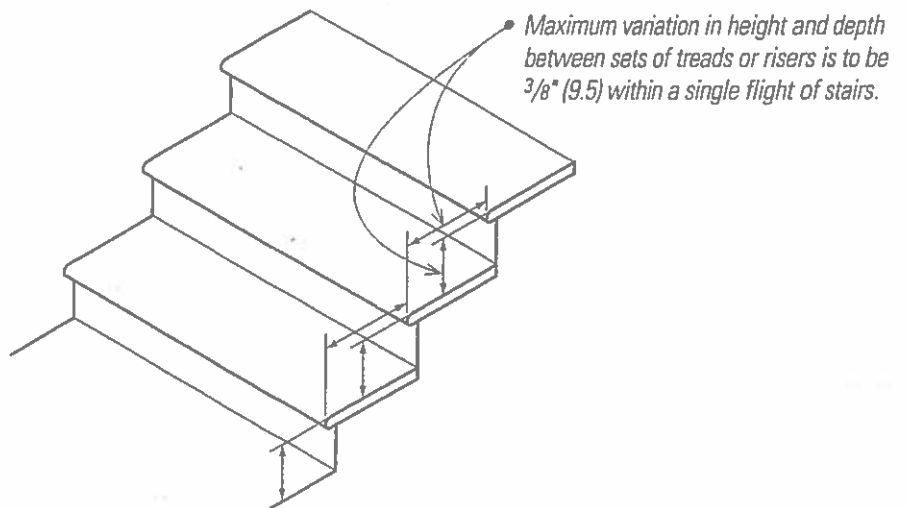
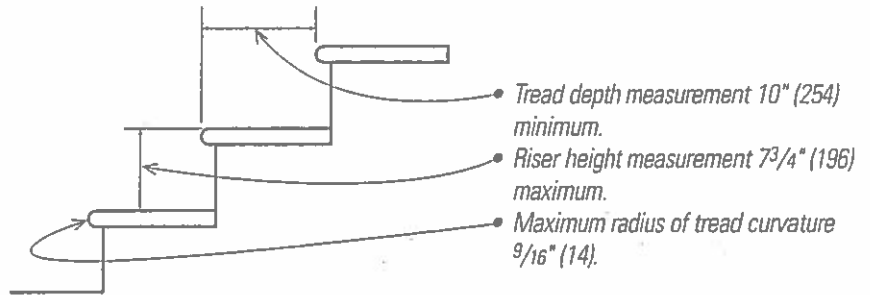
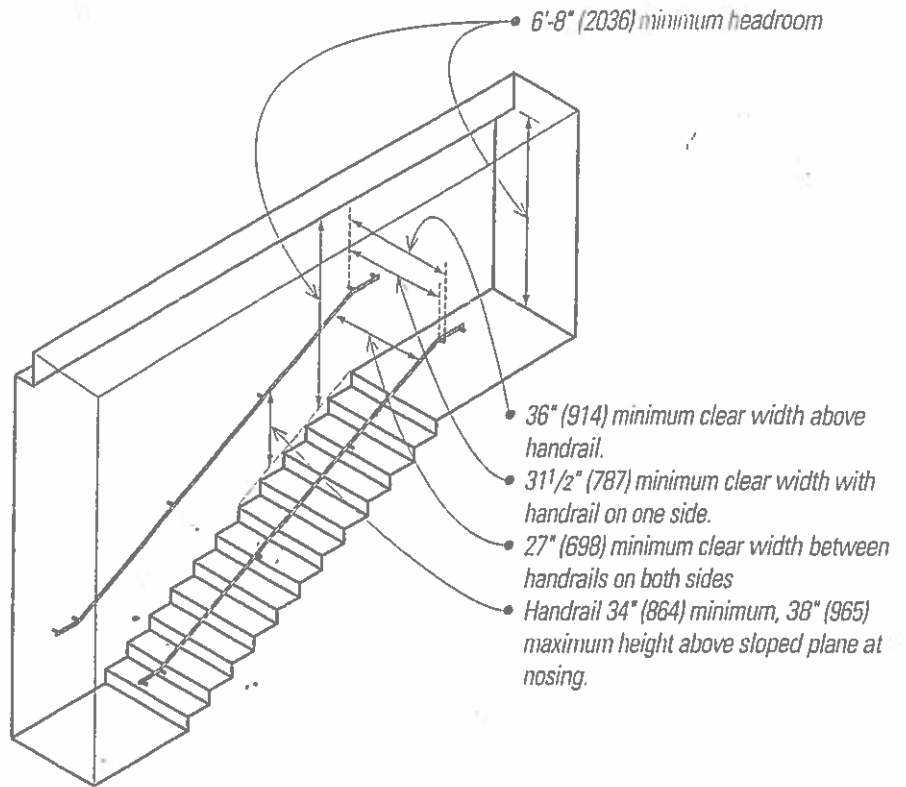


## MEANS OF EGRESS

### Means of Egress

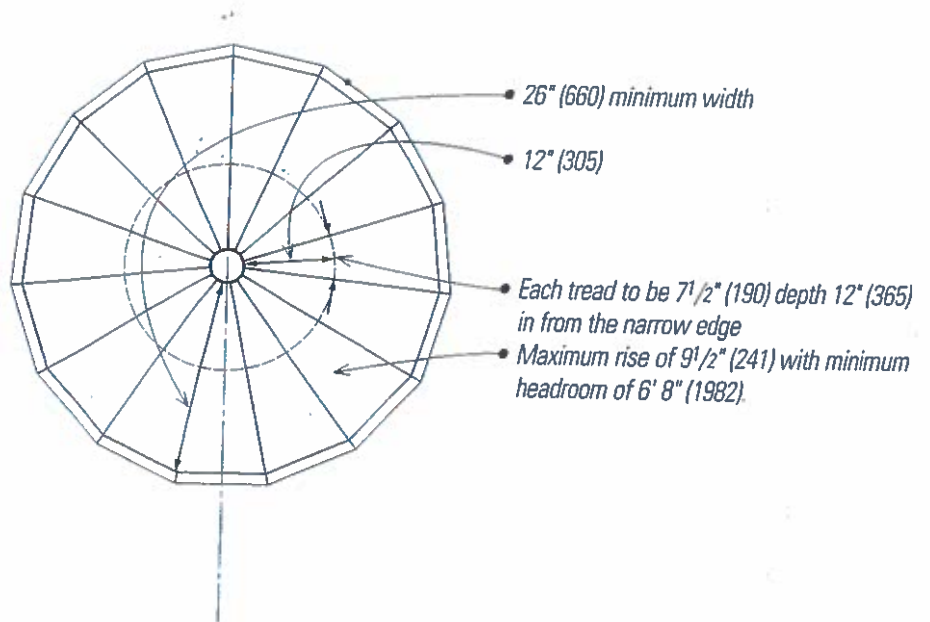
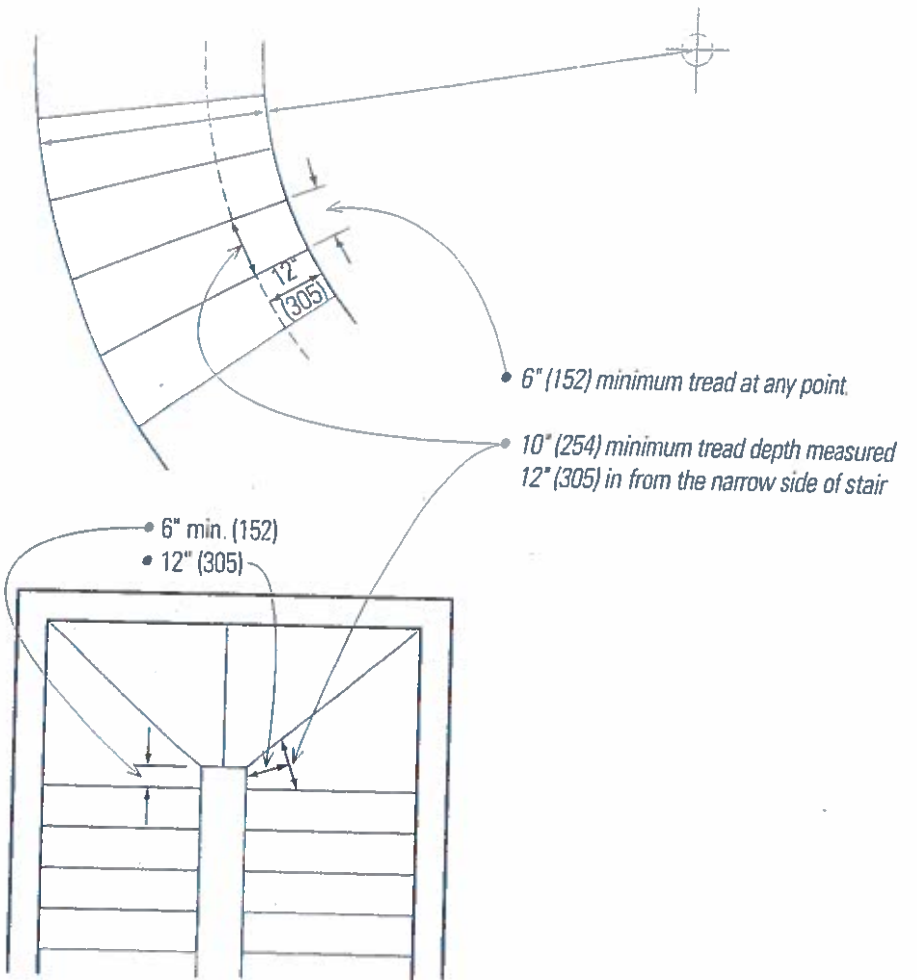
Stairways are to be at least 36" (914) in width at all points above the handrail height. Handrails may not project more than 4 1/2" (114) on either side of the stairway into the required stair width. Stairs are to have a minimum clear height of 6'-8" (2036) measured vertically from a sloped plane adjoining the tread nosing or above the flat surfaces at landings. Stair risers are to no more than 7 3/4" (196). Stair treads are to be 10" (254) minimum depth. See the illustrations for how the measurements are to be taken and for stair tread profiles.

There is to be a floor or landing at the top and bottom of each stairway. Treads and risers are not to vary too much in a flight of stairs and may vary in length or height no more than 3/8" from the maximum height or length in a flight of stairs.

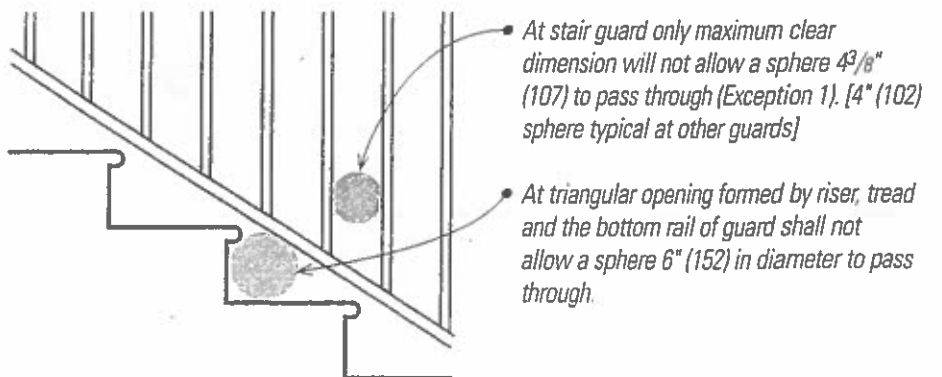
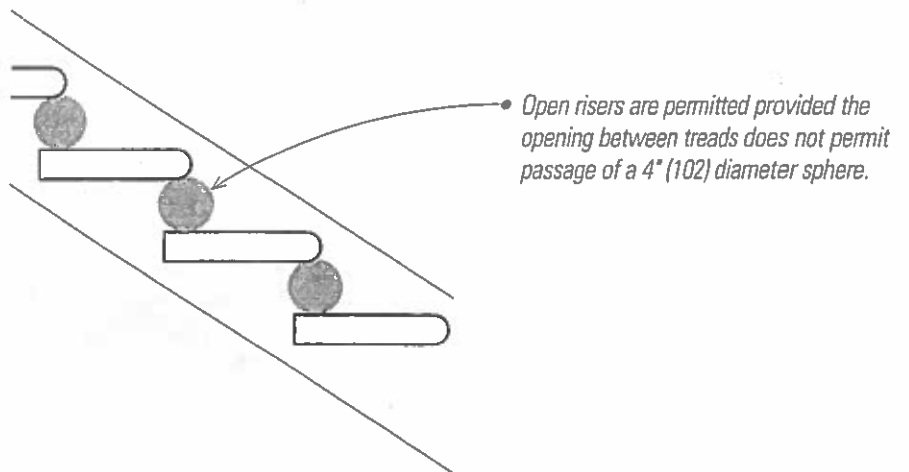
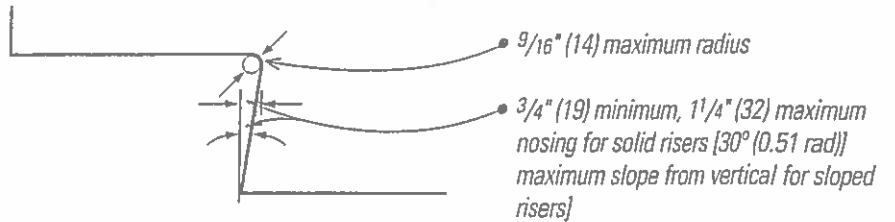
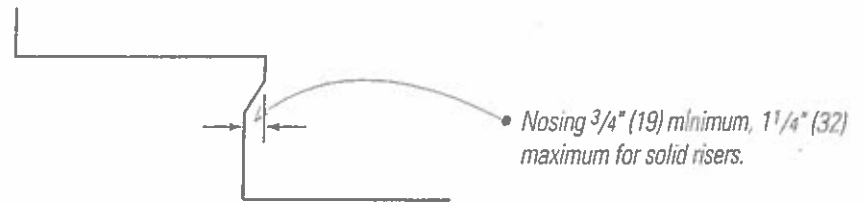


**Means of Egress**

Winder treads are to have dimensions as illustrated. Stair nosings are to be as illustrated. Open risers are allowed but there must be material closing the area between risers so that a foot or a child will not get caught in them. Thus the materials in this area must not allow passage of a 4" (102) diameter sphere. This is the same spacing requirement as for guards. However there is an exception to §R312.2 that allows spacing of guard elements located along the side of a stair to be 4<sup>3</sup>/<sub>8</sub>" (107). This may be useful in coordinating vertical picket spacing with tread and riser proportions.

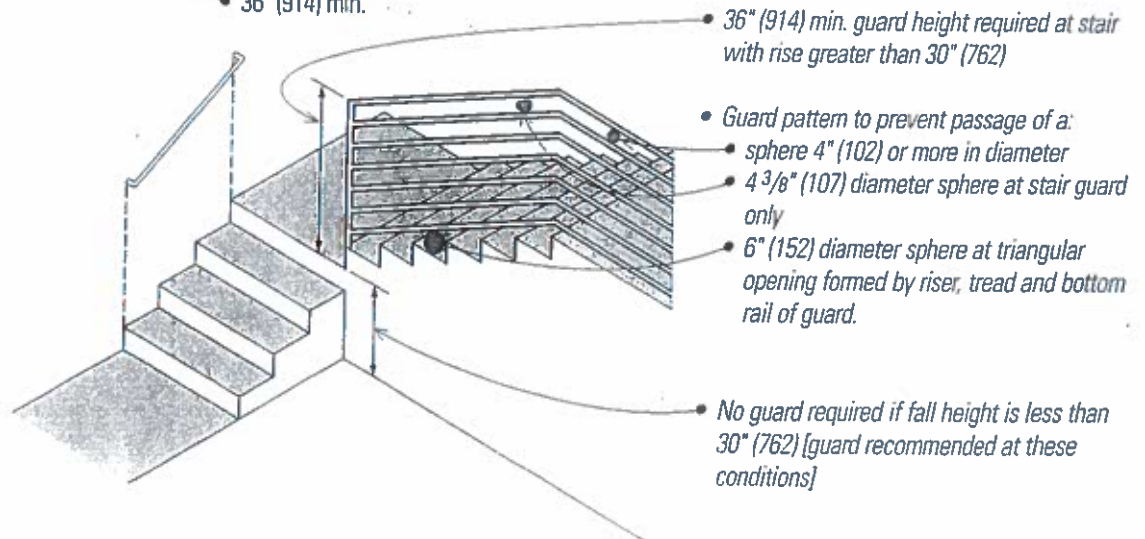
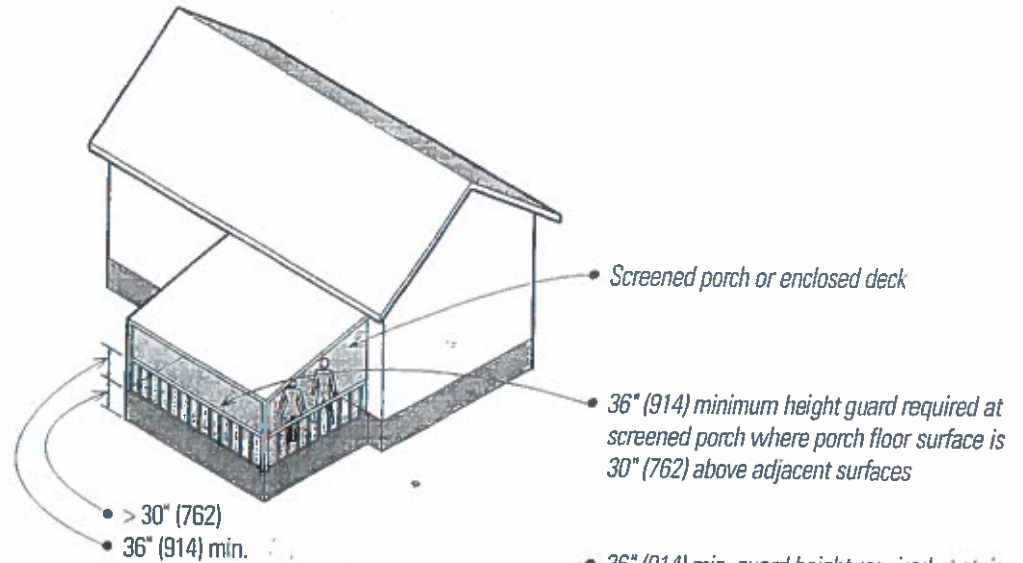
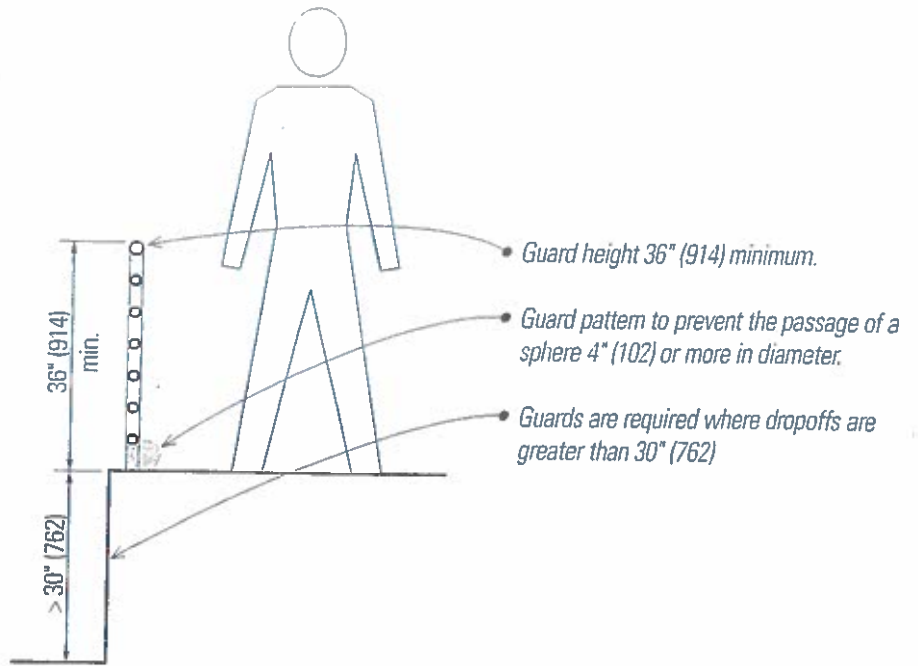


**Spiral Stairway, §R311.7.9.1**

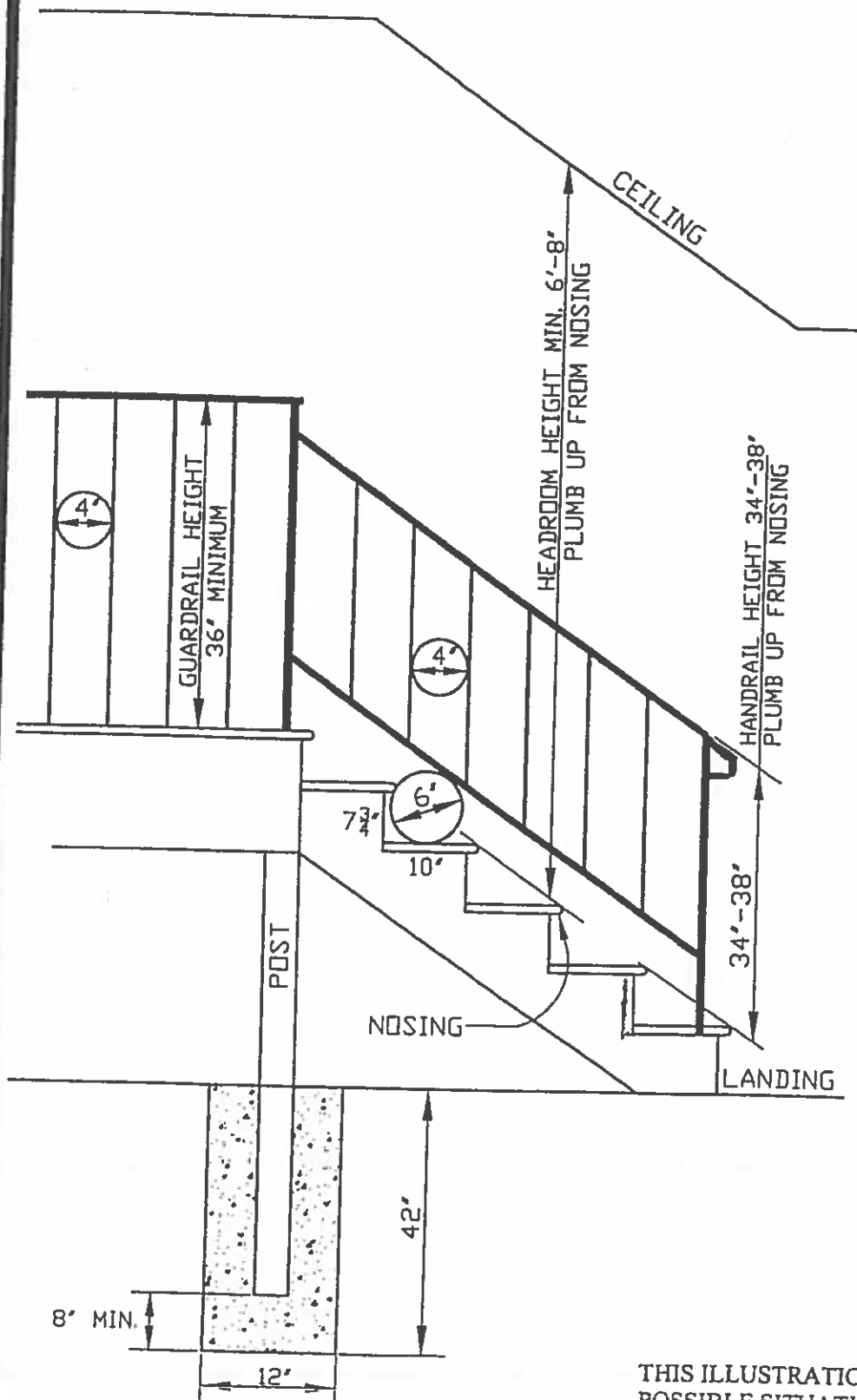


**Guards**

Areas where people may fall more than 30" (762) below the location where they are standing are required to have guards. This includes porches, balconies, ramps, or raised floor surfaces. The guards are to be at least 36" (914) in height. Porches or decks enclosed with screens are also to have guards if they meet the 30" (762) criteria for height above grade. The open sides of stairs with a rise of more than 30" (762) are to have guards located at least 34" (864) above the same plane used to determine handrail heights. Guards are to have a pattern of material which does not allow passage of a sphere 4" (102) or more in diameter. See the illustrations on pages 86 and 88 for exceptions related to the requirements for guards at stairs.



# STAIRS, HANDRAILS, LANDINGS & GUARDRAILS FOR ONE & TWO FAMILY DWELLINGS



1. A DOOR AT THE TOP OR BOTTOM OF STAIRS WILL REQUIRE MORE INFORMATION
2. GUARDRAIL REQUIRED IF OVER 30" ABOVE GRADE.
3. GUARDRAIL MINIMUM HEIGHT IS 36 INCHES.
4. A REQUIRED GUARDRAIL MUST BE CONTINUED DOWN THE STAIRS TO GRADE.
5. STAIRWAY WIDTH MINIMUM IS 36 INCHES.
6. LANDING MINIMUM LENGTH AND WIDTH IS 36 INCHES. MAXIMUM TOTAL RISE BETWEEN LANDINGS IS 12 FEET.
7. INTERMEDIATE RAILS, SPINDLES OR PATTERN SPACING SO THAT A 4 INCH SPHERE CANNOT PASS THROUGH.
8. HANDRAIL ENDS SHALL BE RETURNED TO WALL OR SHALL TERMINATE IN NEWEL POST.
9. HANDRAILS ARE ONLY REQUIRED ON ONE SIDE.
10. TREADS ALL EQUAL, MINIMUM RUN 10 INCHES
11. RISERS ALL EQUAL, MINIMUM 4 INCHES. MAXIMUM 7 3/4 INCHES.
12. IF RUN IS LESS THAN 11 INCHES A NOSING OF 3/4 TO 1 1/4 INCH IS REQUIRED
13. DESIGN LOAD FOR DECKS IS 40 POUNDS PER SQUARE FOOT.

THIS ILLUSTRATION CANNOT FIT EVERY POSSIBLE SITUATION. CONSULT YOUR CODE BOOK OR A KNOWLEDGEABLE PROFESSIONAL.

