

Stairs & Decks

General

03 IRC 97 UBC

- Illumination req'd for all stairways [303.6] {210.70A2^E}
- Control for light req'd at top and bottom of stairs (if 6 or more risers) [303.6.1] {210.70A2^E}
- Headroom min 6ft 8in **F19** [311.5.2] {1003.3.3.4}
- Min stairway width above handrail 36in [311.5.1] {1003.3.3.2}
- Handrail may project into req'd width 4½in {3½in} **F18** [311.5.1] {1003.3.3.2}
- Max riser height 7¾in {8in} **F18** [311.5.3.1] {1003.3.3.3x}
- Min tread depth 10in {9in} **F18** [311.5.3.2] {1003.3.3.3x}
- Max difference between tallest & shortest riser or largest & shortest tread run ¾in [311.5.3.1,2] {1003.3.3.3}
- Winder tread min 8in & develop req'd length at ≤12in from inside of winder **F17** [311.5.3.2] {1003.3.3.8.2}
- Nosing min ¾in max 1¼in req'd on stairs w/solid risers EXC **F18** [311.5.3.3] {n/a}
- Nosing not req'd if tread depth ≥11in [311.5.3.3x] {n/a}

Fig. 17 • Winding Stairs

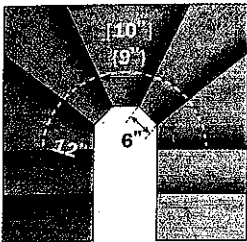
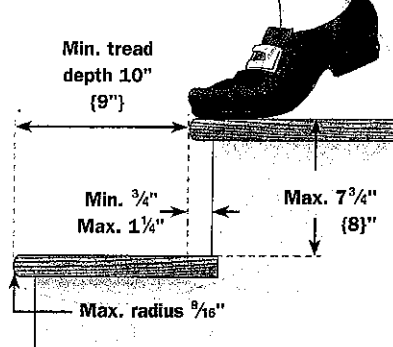


Fig. 18 • Stair Profile



Handrails

- Grippable handrail req'd if 4 or more risers [311.5.6]¹⁵ {1003.3.3.6}
- Handrail height min 34in max 38in **F19** [311.5.6.1] {1003.3.3.6}
- Grips min 1¼in max 2in circular cross section **F20** [311.5.6.3]¹⁶ {1003.3.3.6}
- Min 1½in between wall & handrail **F20** [311.5.6.2] {1003.3.3.6}
- Ends req'd to return to wall or newel post [311.5.6.2] {1003.3.3.6}
- Handrail on open side of stairs must not allow 4in sphere to pass through [312.2] {509.3}
- Openings between treads of open risers <4in ... [311.5.3.3] {n/a}
- Triangular space between riser, tread & rail must not allow 6in sphere to pass through **F19** [312.2X1] {509.3X2}

- Cu = copper
- CWV = combination waste and vent
- DFU = drainage fixture unit(s)
- Diam = diameter

Fig. 19

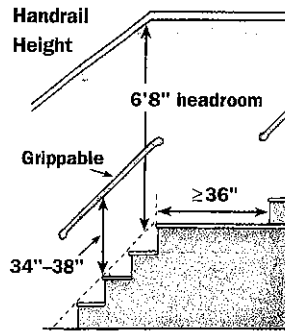
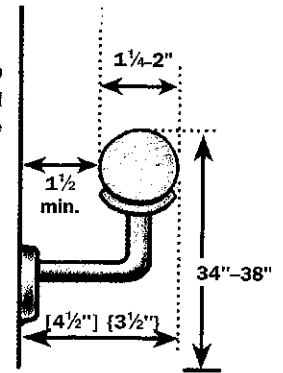


Fig. 20
Handrail
Size



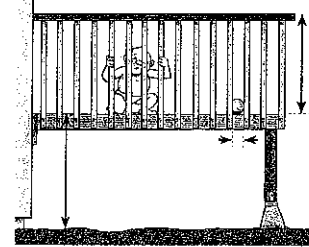
Guardrails

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- Req'd for any walkoff >30in above floor or grade **F21** [312.1] {509.1}
- Min height 36in (34in if guard is stair handrail) . **F21** [312.1] {509.2X1}
- Opening must not allow 4in sphere to pass through **F21** [312.2] {509.3}
- Guards req'd on open sides of stairs if total rise above floor or grade >30in [312.1] {509.1}

Fig. 21
Guardrails

Guardrail req'd when deck surface to ground >30"



Min. height: 36" for 1- & 2-family dwellings

Max. opening such that a 4" sphere cannot pass through

Table 13 • Special Inspection Reports

S.I. reports due before final inspection	Required	Received
Concrete >2,500 psi		
Pilings, drilled piers & caissons		
Structural masonry		
Bolts in concrete		
Structural welding/steel moment frames		
Glu-Lam certificate		
Shear nailing <4" o.c		
High-strength bolting		
Prestressed concrete: rebar & tendons		
EIFS		
Special case:		