



DIVISION OF HOUSING AND BUILDING
12650 DETROIT AVENUE • LAKEWOOD, OHIO 44107

MAIN (216) 529-6270

FAX (216) 529-5930

housing.building@lakewoodoh.net

www.onelakewood.com

Stairway Design Guidelines

Code Requirements:

Residential (see RCO 311.7 for details):

Width (RCO 311.7.1) – minimum 36” above handrail, 31 ½” below handrail if one handrail, 27” below handrail if two handrails.

Headroom (RCO 311.7.2) – minimum 6’ 8”

Treads (RCO 311.7.4) – minimum 9” (Maximum 3/8” deviation between largest and smallest)

Risers (RCO 311.7.4) – maximum 8 ¼” (Maximum 3/8” deviation between largest and smallest). Openings between treads may not permit the passage of a 4” sphere.

Landings (RCO 311.7.5) – Width cannot be less than the stairway, and a minimum of 36” in the direction of travel.

Illumination (RCO 311.7.8) – Stairs shall be provided illumination per RCO 303.6.

Handrails (RCO 311.7.7) - Handrails shall be provided on at least one side of each continuous flight (4 or more risers) measured vertically 34”-38” from the sloped plane adjoining the tread nosing.

Guards (RCO 312) – When Stairs exceed 30” above grade at any point within 36” horizontally of the open side, a guard is required. When required, guards shall be a minimum of 34” high and a maximum of 38” high when also used as a handrail.

Commercial (see OBC 1009 for details):

Width (OBC 1009.1) – minimum 44” (But in compliance with OBC 1005.1 and 1007.3)

Headroom (OBC 1009.2) – minimum 6’ 8”

Treads (OBC 1009.4) – minimum 11” (Maximum 3/8” deviation between largest and smallest)

Risers (OBC 1009.4) – minimum 4”, maximum 7” (Maximum 3/8” deviation between largest and smallest).

Landings (OBC 1009.5) – Length and width cannot be less than the width of the stairway but the length need not exceed 48” in the direction of travel.

Illumination – Stairs shall be provided illumination per OBC 1205.4.

Handrails (OBC 1009.12) - Except within individual dwelling units handrails shall be provided on both sides of stairs, continuous, 34”-38” measured vertically from the sloped plane adjoining the tread nosing and meet the graspability requirements of OBC 1012.3.

Guards (OBC 1013) - When Stairs exceed 30” above grade at any point within 36” horizontally of the open side, a guard is required. See 1013.2 for specific height regulations.

Do The Math

Note: A stair calculator can be found online at: <http://www.mycarpentry.com/stair-calculator.html>