

Minimum Sill Dimensions for Scaffolds

The *maximum rated load* is the total of all loads including the working load, the weight of the scaffold, and other loads that may be reasonably anticipated.

TABLE 1 MINIMUM SILL DIMENSIONS FOR 2×10 NOMINAL LUMBER

Scaffold Leg Load (Maximum Rated Load)	Allowable Ground Bearing Pressure Pounds Per Square Foot			
	500 psf •Mud •Organic silt •Unprepared fill	3,000 psf •Sand •Silty sand •Clayey sand •Silty gravel •Clayey gravel •Stiff clay •Firm, inorganic silt	4,000 psf •Hard, dry clay	5,000 psf •Gravel •Very compact mix of clay, sand and gravel
500 lb./leg	16 in. (2×10)	10 in. (2×10)		
1,500 lb./leg	46 in. (2×10)	17 in. (2×10)		
2,400 lb./leg	Contact engineering	27 in. (2×10)		
3,000 lb./leg		34 in. (2×10)		
4,000 lb./leg		23 in. (Double 2×10*)		
Notes: *Double 2 x 10 = two thicknesses of 2 x 10 nominal (3 in. thick). From Safway document ORN-900-3 Rev. D-4/13: Safety Issues, Sills.				

For Tables 1 and 2, assume the weight at the maximum capacity of the scaffold, given the height and configuration. Consult the manufacturer's specifications of the scaffold being used. To give a general idea, the maximum pressure exerted on the ground surface by each leg using welded frame scaffold is typically 2,000-3,000 lb. per leg; for tube and coupler scaffold it may be as much as 3,000 lb. per leg; and for system scaffold, as much as 8,000 lb. per leg when braced at each node point in both directions.

TABLE 2. MINIMUM SILL DIMENSIONS FOR PLYWOOD

Scaffold Leg Load (Maximum Rated Load)	Allowable Ground Bearing Pressure Pounds Per Square Foot			
	500 psf •Mud •Organic silt •Unprepared fill	3,000 psf •Sand •Silty sand •Clayey sand •Silty gravel •Clayey gravel •Stiff clay •Firm, inorganic silt	4,000 psf •Hard, dry clay	5,000 psf •Gravel •Very compact mix of clay, sand and gravel
500 lb./leg	12 x 12 x ¾ in.	7 x 7 x ¾ in.	7 x 7 x ¾ in.	7 x 7 x ¾ in.
1,500 lb./leg	Not recommended	9 x 9 x 1½ in.	7 x 7 x ¾ in.	7 x 7 x ¾ in.
2,400 lb./leg		11 x 11 x 2¼ in.	10 x 10 x 1½ in.	9 x 9 x 1½ in.
3,000 lb./leg		12 x 12 x 3 in.	11 x 11 x 2¼ in.	10 x 10 x 1½ in.
4,000 lb./leg		14 x 14 x 3¾ in.	12 x 12 x 3 in.	11 x 11 x 2¼ in.
<p>Notes: 1½" plywood = two sheets of ¾" plywood 2¼" plywood = three sheets of ¾" plywood 3" plywood = four sheets of ¾" plywood 3¾" plywood = five sheets of ¾" plywood From Safway document ORN-900-3 Rev. D-4/13: Safety Issues, Sills.</p>				