

**TABLE 1607.1—continued
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS AND
MINIMUM CONCENTRATED LIVE LOADS^a**

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
31. Schools Classrooms Corridors above first floor First-floor corridors	40 80 100	1,000 1,000 1,000
32. Scuttles, skylight ribs and accessible ceilings	—	200
33. Sidewalks, vehicular driveways and yards, subject to trucking	250 ^d	8,000 ^e
34. Skating rinks	100	—
35. Stadiums and arenas Bleachers Fixed seats (fastened to floor)	100 ^c 60 ^c	—
36. Stairs and exits One- and two-family dwellings All other	40 100	Note f
37. Storage warehouses (shall be designed for heavier loads if required for anticipated storage) Heavy Light	250 125	
38. Stores Retail First floor Upper floors Wholesale, all floors	100 75 125	1,000 1,000 1,000
39. Vehicle barriers	See Section 1607.7.3	
40. Walkways and elevated platforms (other than exitways)	60	—
41. Yards and terraces, pedestrians	100	—
42. [OSHPD 2] Storage racks and wall-hung cabinets	Total loads ^m	—

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm²,
1 square foot = 0.0929 m²,
1 pound per square foot = 0.0479 kN/m², 1 pound = 0.004448 kN,
1 pound per cubic foot = 16 kg/m³

- a. Floors in garages or portions of buildings used for the storage of motor vehicles shall be designed for the uniformly distributed live loads of Table 1607.1 or the following concentrated loads: (1) for garages restricted to vehicles accommodating not more than nine passengers, 3,000 pounds acting on an area of 4.5 inches by 4.5 inches; (2) for mechanical parking structures without slab or deck which are used for storing passenger vehicles only, 2,250 pounds per wheel.
- b. The loading applies to stack room floors that support nonmobile, double-faced library bookstacks, subject to the following limitations:
 - 1. The nominal bookstack unit height shall not exceed 90 inches;
 - 2. The nominal shelf depth shall not exceed 12 inches for each face; and
 - 3. Parallel rows of double-faced bookstacks shall be separated by aisles not less than 36 inches wide.
- c. Design in accordance with the ICC *Standard on Bleachers, Folding and Telescopic Seating and Grandstands*.
- d. Other uniform loads in accordance with an approved method which contains provisions for truck loadings shall also be considered where appropriate.

- e. The concentrated wheel load shall be applied on an area of 20 square inches.
- f. Minimum concentrated load on stair treads (on area of 4 square inches) is 300 pounds.
- g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design determined by the building official (see Section 1608). For special-purpose roofs, see Section 1607.11.2.2.
- h. See Section 1604.8.3 for decks attached to exterior walls.
- i. Attics without storage are those where the maximum clear height between the joist and rafter is less than 42 inches, or where there are not two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide, or greater, located within the plane of the truss. For attics without storage, this live load need not be assumed to act concurrently with any other live load requirements.
- j. For attics with limited storage and constructed with trusses, this live load need only be applied to those portions of the bottom chord where there are two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide or greater, located within the plane of the truss. The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met:
 - i. The attic area is accessible by a pull-down stairway or framed opening in accordance with Section 1209.2, and
 - ii. The truss shall have a bottom chord pitch less than 2:12.
 - iii. Bottom chords of trusses shall be designed for the greater of actual imposed dead load or 10 psf, uniformly distributed over the entire span.
- k. Attic spaces served by a fixed stair shall be designed to support the minimum live load specified for habitable attics and sleeping rooms.
- l. Roofs used for other special purposes shall be designed for appropriate loads as approved by the building official.
- m. [OSHPD 2] *The minimum vertical design live load shall be as follows:*
 - Paper media:*
 - 12-inch-deep shelf 33 pounds per lineal foot
 - 15-inch-deep shelf 41 pounds per lineal foot, or
 - 33 pounds per cubic foot per total volume of the rack or cabinet, whichever is less,
 - Film media:*
 - 18-inch-deep shelf 100 pounds per lineal foot, or
 - 50 pounds per cubic foot per total volume of the rack or cabinet, whichever is less,
 - Other media:*
 - 20 pounds per cubic foot or 20 pounds per square foot, whichever is less but not less than actual loads.

1607.7.3 Vehicle barriers. Vehicle barrier systems for passenger cars shall be designed to resist a single load of 6,000 pounds (26.70 kN) applied horizontally in any direction to the barrier system and shall have anchorage or attachment capable of transmitting this load to the structure. For design of the system, the load shall be assumed to act at a minimum height of 1 foot, 6 inches (457 mm) above the floor or ramp surface on an area not to exceed 1 square foot (305 mm²), and is not required to be assumed to act concurrently with any handrail or guard loadings specified in the preceding paragraphs of Section 1607.7.1. Garages accommodating trucks and buses shall be designed in accordance with an approved method that contains provision for traffic railings.

1607.8 Impact loads. The live loads specified in Section 1607.3 include allowance for impact conditions. Provisions shall be made in the structural design for uses and loads that involve unusual vibration and impact forces.

1607.8.1 Elevators. Elevator loads shall be increased by 100 percent for impact and the structural supports shall be designed within the limits of deflection prescribed by ASME A17.1.