**Table 1. "LP LVL" Specified Strengths[3][4]**

| Grade | Bending Strength, $F_b$ MPa (psi) | | Tensile Strength Parallel to Grain, $F_t$ MPa (psi) | Compression Strength Parallel to Grain, $F_{c//}$ MPa (psi) | Compressive Strength Perpendicular to Grain, $F_{c\perp}$ MPa (psi) | | Horizontal Shear Strength, $F_v$ MPa (psi) | | Modulus of Elasticity MPa (x10$^6$ psi) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Beam | Plank | | | Beam | Plank | Beam | Plank | Beam | Plank |
| **"LP LVL" (a.k.a. "Gang-Lam LVL")** | | | | | | | | | | |
| 2250$F_b$-1.5E | 28.67[1] (4 158[1]) | 28.03 (4 066) | 13.93[2] (2 021[2]) | 25.86 (3 751) | 9.41 (1 365) | 6.28 (910) | 3.65 (530) | 1.79 (260) | 10 340 (1.50) | 9 650 (1.40) |
| 2950$F_b$-2.0E | 37.59[1] (5 452[1]) | 37.59 (5 452) | 18.58[2] (2 694[2]) | 35.21 (5 107) | 9.41 (1 365) | 6.90 (1 001) | 3.72 (540) | 1.79 (260) | 13 790 (2.00) | 13 790 (2.00) |

GENERAL NOTE: All specified strengths are based on CSA O86-01.

Notes to Table 1:

1. The specified bending strength, $F_b$, is assigned for a standard depth of 305 mm (12 in.). For depths greater than 305 mm (12 in.), multiply $F_b$ by (305/depth in mm)$^{0.143}$ [(12/depth in in.)$^{0.143}$]. For depths less than 305 mm (12 in.), multiply $F_b$ by (305/depth in mm)$^{0.111}$ [(12/depth in in.)$^{0.111}$]. For depths less than 89 mm (3 ½ in.), multiply $F_b$ by 1.147.
2. The specified tension strength, $F_t$, is assigned for a standard length of 6 096 mm (20 ft.). For lengths other than 6 096 mm (20 ft.), multiply $F_t$ by (6 096/length in mm)$^{0.111}$ [(20/length in ft.)$^{0.111}$]. For lengths less than 914 mm (3 ft.), use the value adjusted for 914 mm (3 ft.).
3. Specified design stresses in the above table are for standard term load duration and may be adjusted (with the exception of modulus of elasticity) using load duration factors per the code.
4. Specified design stresses in the above table shall apply to product installation conditions of use that are dry, well ventilated and covered. Dry conditions are product installation conditions where ambient moisture content is 16% or less.

**Table 1. Specified Design Wind Pressures for use with LP LVL Stud and Column Tables (psf) [1,2]**

| Exposure Category | 1/50 year reference wind pressure, $q_{1/50}$ (psf) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 18 |
| open terrain | 18.8 | 21.2 | 23.5 | 25.9 | 28.2 | 32.9 | 35.3 | 37.6 | 40.0 | 42.3 |
| rough terrain [3] | 13.2 | 14.8 | 16.5 | 18.1 | 19.7 | 23.0 | 24.7 | 26.3 | 28.0 | 29.6 |

Notes:

1. Design wind pressure = Iw q1/50 Ce (Cp Cg - Cpi Cgi) in accordance with article 4.1.7.1 of the 2005 NBCC.
2. The following assumptions have been used in the calculation of design wind pressure:
   - An importance factor, Iw, of 1.0 for strength limit state. A factor of 0.75 for serviceablility has been incorporated into the stud tables.
   - A mean roof height of 10m or less for open terrain (Ce = 1.0) and a mean roof height of 12m or less for rough terrain (Ce = 0.7).
   - An interior zone is assumed (Cp Cg = - 1.75 components and cladding load, Figure B-8 of the NBCC Supplement). For edge zone multiply by 1.15.
   - A closed building has been assumed (Cpi = 0.3, Cgi = 2).
3. Rough terrain includes urban, suburban and wooded areas extending upwind form the building uninterupted for at least 1 km or 10 times the building height, whichever is greater.
4. Wind pressure calculations are in accordance with the 2004 Wood Frame Construction Guide published by the Canadian Wood Council.
5. These wind pressures are applicable to buildings falling under Part 9 of the 2005 National Building Code of Canada.

**Table 2. Stud-to-Plate Connections**

| Connection | Nails | Factored lateral resistance (lb) |
|---|---|---|
| 2 end or toe-nails | 3-1/4" spiral | 143 |
| 3 end or toe-nails | 3-1/4" spiral | 215 |
| 4 end or toe-nails | 3-1/4" spiral | 287 |
| 1 - Simpson Strong-Tie A34 | 8 - 8d x 1-1/2" | 485 |
| 1 - USP Connectors RSC FA50 | 8 - 8d x 1-1/2" | 530 |
| 1 - Simpson Strong-Tie A35 | 12 - 8d x 1-1/2" | 595 |
| 1 - Simpson Strong-Tie A23 | 8 - 8d x 1-1/2" | 720 |
| 1 - USP Connectors RSC FA100 | 14 - 8d x 1-1/2" | 860 |
| 2 - Simpson Strong-Tie A34 | 8 - 8d x 1-1/2" | 970 |
| 2 - USP Connectors RSC FA50 | 8 - 8d x 1-1/2" | 1060 |
| 2 - Simpson Strong-Tie A35 | 12 - 8d x 1-1/2" | 1190 |
| 2 - Simpson Strong-Tie A23 | 8 - 8d x 1-1/2" | 1440 |
| 2 - USP Connectors RSC FA100 | 14 - 8d x 1-1/2" | 1720 |
| 4 - Simpson Strong-Tie A34 | 8 - 8d x 1-1/2" | 1940 |
| 4 - USP Connectors RSC FA50 | 8 - 8d x 1-1/2" | 2120 |
| 4 - Simpson Strong-Tie A23 | 8 - 8d x 1-1/2" | 2880 |

Note:

1. Multiple Simpson or USP connectors are for use with LVL columns only.
2. Custom connections may be required for some large column applications.
3. Factored stud reaction = 1.4 x specified wind pressure x stud spacing x stud length/2
4. Values are for short term loading ($K_D$ = 1.15)
5. Refer to Manufacturer's literature for any changes to specifications and values.

**LVL STUD DESIGN TABLE** **2250Fb-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of stud only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] Specified lateral load (plf) | | | | 1-1/2" x 5-1/2" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 7-1/4" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 9-1/4" [6] Specified lateral load (plf) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/744 | L/558 | L/447 | L/372 | L/2888 | L/2166 | L/1733 | L/1444 | L/1083 | L/867 | L/6616 | L/4962 | L/3970 | L/3308 | L/2481 | L/1985 | L/13741 | L/10305 | L/8244 | L/6870 | L/5153 | L/4122 |
| 9 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/523 | L/392 | L/314 | L/261 | L/2029 | L/1521 | L/1217 | L/1014 | L/761 | L/609 | L/4647 | L/3485 | L/2788 | L/2323 | L/1742 | L/1394 | L/9650 | L/7238 | L/5790 | L/4825 | L/3619 | L/2895 |
| 10 | Vertical (lb) | 2238 | 2144 | 2058 | 1858 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/381 | L/286 | L/229 | L/191 | L/1479 | L/1109 | L/887 | L/739 | L/555 | L/444 | L/3387 | L/2541 | L/2032 | L/1694 | L/1270 | L/1016 | L/7035 | L/5276 | L/4221 | L/3518 | L/2638 | L/2111 |
| 11 | Vertical (lb) | 1740 | 1657 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/286 | L/215 | | | L/1111 | L/833 | L/667 | L/556 | L/417 | L/333 | L/2545 | L/1909 | L/1527 | L/1272 | L/954 | L/763 | L/5286 | L/3964 | L/3171 | L/2643 | L/1982 | L/1586 |
| 12 | Vertical (lb) | 1367 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/221 | | | | L/856 | L/642 | L/514 | L/428 | L/321 | L/257 | L/1960 | L/1470 | L/1176 | L/980 | L/735 | L/588 | L/4071 | L/3053 | L/2443 | L/2036 | L/1527 | L/1221 |
| 13 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 3669 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/673 | L/505 | L/404 | L/337 | L/252 | L/202 | L/1542 | L/1156 | L/925 | L/771 | L/578 | L/463 | L/3202 | L/2402 | L/1921 | L/1601 | L/1201 | L/961 |
| 14 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 3405 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/539 | L/404 | L/323 | L/269 | L/202 | | L/1234 | L/926 | L/741 | L/617 | L/463 | L/370 | L/2564 | L/1923 | L/1538 | L/1282 | L/961 | L/769 |
| 15 | Vertical (lb) | | | | | 3931 | 3770 | 3624 | 3354 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/438 | L/329 | L/263 | L/219 | | | L/1004 | L/753 | L/602 | L/502 | L/376 | L/301 | L/2084 | L/1563 | L/1251 | L/1042 | L/782 | L/625 |
| 16 | Vertical (lb) | | | | | 3333 | 3185 | 3027 | 2594 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/361 | L/271 | L/217 | L/181 | | | L/827 | L/620 | L/496 | L/413 | L/310 | L/248 | L/1718 | L/1288 | L/1031 | L/859 | L/644 | L/515 |
| 17 | Vertical (lb) | | | | | 2838 | 2701 | 2388 | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 4834 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/301 | L/226 | L/181 | | | | L/689 | L/517 | L/414 | L/345 | L/259 | L/207 | L/1432 | L/1074 | L/859 | L/716 | L/537 | L/430 |
| 18 | Vertical (lb) | | | | | 2427 | 2282 | | | | | 5304 | 5304 | 5304 | 5304 | 4820 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/254 | L/190 | | | | | L/581 | L/436 | L/348 | L/290 | L/218 | | L/1206 | L/905 | L/724 | L/603 | L/452 | L/362 |
| 19 | Vertical (lb) | | | | | 2084 | | | | | | 5304 | 5304 | 5265 | 5009 | 3836 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/216 | | | | | | L/494 | L/370 | L/296 | L/247 | L/185 | | L/1026 | L/769 | L/615 | L/513 | L/385 | L/308 |
| 20 | Vertical (lb) | | | | | 1797 | | | | | | 5014 | 4802 | 4606 | 4124 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/423 | L/318 | L/254 | L/212 | | | L/879 | L/660 | L/528 | L/440 | L/330 | L/264 |
| 21 | Vertical (lb) | | | | | | | | | | | 4424 | 4223 | 3963 | 3379 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | | | | | | | L/366 | L/274 | L/219 | L/183 | | | L/760 | L/570 | L/456 | L/380 | L/285 | L/228 |
| 22 | Vertical (lb) | | | | | | | | | | | 3913 | 3723 | 3303 | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 5605 |
| | Defl. Ratio | | | | | | | | | | | L/318 | L/239 | L/191 | | | | L/661 | L/496 | L/396 | L/330 | L/248 | L/198 |
| 23 | Vertical (lb) | | | | | | | | | | | 3469 | 3290 | | | | | 6767 | 6767 | 6767 | 6767 | 5951 | |
| | Defl. Ratio | | | | | | | | | | | L/278 | L/209 | | | | | L/578 | L/434 | L/347 | L/289 | L/217 | |
| 24 | Vertical (lb) | | | | | | | | | | | 3083 | 2808 | | | | | 6767 | 6767 | 6767 | 6495 | 4960 | |
| | Defl. Ratio | | | | | | | | | | | L/245 | L/184 | | | | | L/509 | L/382 | L/305 | L/254 | L/191 | |
| 25 | Vertical (lb) | | | | | | | | | | | 2746 | | | | | | 6711 | 6428 | 6169 | 5569 | | |
| | Defl. Ratio | | | | | | | | | | | L/217 | | | | | | L/450 | L/338 | L/270 | L/225 | | |
| 26 | Vertical (lb) | | | | | | | | | | | 2452 | | | | | | 6077 | 5806 | 5544 | 4761 | | |
| | Defl. Ratio | | | | | | | | | | | L/193 | | | | | | L/400 | L/300 | L/240 | L/200 | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | 5511 | 5252 | 4805 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/357 | L/268 | L/214 | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | 5004 | 4757 | 4156 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/320 | L/240 | L/192 | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | 4551 | 4315 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/288 | L/216 | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 4145 | 3803 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/261 | L/195 | | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft).
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86S1-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the stud height**. A hole is permitted at the lower or upper third of the stud only. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - **No notching is permitted.**
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL STUD DESIGN TABLE** **2250$F_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] | | | | 1-1/2" x 5-1/2" [5] | | | | | | 1-1/2" x 7-1/4" [5] | | | | | | 1-1/2" x 9-1/4" [6] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Specified lateral load (plf) | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | |
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2518 | 2454 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/744 | L/558 | L/447 | L/372 | L/2888 | L/2166 | L/1733 | L/1444 | L/1083 | L/867 | L/6616 | L/4962 | L/3970 | L/3308 | L/2481 | L/1985 | L/13741 | L/10305 | L/8244 | L/6870 | L/5153 | L/4122 |
| 9 | Vertical (lb) | 2031 | 1966 | 1904 | 1843 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/523 | L/392 | L/314 | L/261 | L/2029 | L/1521 | L/1217 | L/1014 | L/761 | L/609 | L/4647 | L/3485 | L/2788 | L/2323 | L/1742 | L/1394 | L/9650 | L/7238 | L/5790 | L/4825 | L/3619 | L/2895 |
| 10 | Vertical (lb) | 1563 | 1503 | 1436 | 1216 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/381 | L/286 | L/229 | L/191 | L/1479 | L/1109 | L/887 | L/739 | L/555 | L/444 | L/3387 | L/2541 | L/2032 | L/1694 | L/1270 | L/1016 | L/7035 | L/5276 | L/4221 | L/3518 | L/2638 | L/2111 |
| 11 | Vertical (lb) | 1213 | 1158 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/286 | L/215 | | | L/1111 | L/833 | L/667 | L/556 | L/417 | L/333 | L/2545 | L/1909 | L/1527 | L/1272 | L/954 | L/763 | L/5286 | L/3964 | L/3171 | L/2643 | L/1982 | L/1586 |
| 12 | Vertical (lb) | 950 | | | | 4024 | 4024 | 4024 | 4024 | 3999 | 3263 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/221 | | | | L/856 | L/642 | L/514 | L/428 | L/321 | L/257 | L/1960 | L/1470 | L/1176 | L/980 | L/735 | L/588 | L/4071 | L/3053 | L/2443 | L/2036 | L/1527 | L/1221 |
| 13 | Vertical (lb) | | | | | 3811 | 3701 | 3596 | 3495 | 2974 | 2273 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/673 | L/505 | L/404 | L/337 | L/252 | L/202 | L/1542 | L/1156 | L/925 | L/771 | L/578 | L/463 | L/3202 | L/2402 | L/1921 | L/1601 | L/1201 | L/961 |
| 14 | Vertical (lb) | | | | | 3214 | 3108 | 3007 | 2882 | 2158 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/539 | L/404 | L/323 | L/269 | L/202 | | L/1234 | L/926 | L/741 | L/617 | L/463 | L/370 | L/2564 | L/1923 | L/1538 | L/1282 | L/961 | L/769 |
| 15 | Vertical (lb) | | | | | 2716 | 2615 | 2519 | 2194 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/438 | L/329 | L/263 | L/219 | | | L/1004 | L/753 | L/602 | L/502 | L/376 | L/301 | L/2084 | L/1563 | L/1251 | L/1042 | L/782 | L/625 |
| 16 | Vertical (lb) | | | | | 2301 | 2206 | 1993 | 1646 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 4291 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/361 | L/271 | L/217 | L/181 | | | L/827 | L/620 | L/496 | L/413 | L/310 | L/248 | L/1718 | L/1288 | L/1031 | L/859 | L/644 | L/515 |
| 17 | Vertical (lb) | | | | | 1957 | 1867 | 1533 | | | | 5304 | 5304 | 5304 | 5153 | 4262 | 3226 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/301 | L/226 | L/181 | | | | L/689 | L/517 | L/414 | L/345 | L/259 | L/207 | L/1432 | L/1074 | L/859 | L/716 | L/537 | L/430 |
| 18 | Vertical (lb) | | | | | 1670 | 1490 | | | | | 4965 | 4794 | 4632 | 4424 | 3331 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/254 | L/190 | | | | | L/581 | L/436 | L/348 | L/290 | L/218 | | L/1206 | L/905 | L/724 | L/603 | L/452 | L/362 |
| 19 | Vertical (lb) | | | | | 1431 | | | | | | 4362 | 4197 | 4041 | 3595 | 2558 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/216 | | | | | | L/494 | L/370 | L/296 | L/247 | L/185 | | L/1026 | L/769 | L/615 | L/513 | L/385 | L/308 |
| 20 | Vertical (lb) | | | | | 1226 | | | | | | 3838 | 3680 | 3440 | 2899 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6077 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/423 | L/318 | L/254 | L/212 | | | L/879 | L/660 | L/528 | L/440 | L/330 | L/264 |
| 21 | Vertical (lb) | | | | | | | | | | | 3383 | 3232 | 2828 | 2314 | | | 6767 | 6767 | 6767 | 6767 | 6323 | 4868 |
| | Defl. Ratio | | | | | | | | | | | L/366 | L/274 | L/219 | L/183 | | | L/760 | L/570 | L/456 | L/380 | L/285 | L/228 |
| 22 | Vertical (lb) | | | | | | | | | | | 2988 | 2838 | 2311 | | | | 6767 | 6767 | 6767 | 6701 | 5227 | 3830 |
| | Defl. Ratio | | | | | | | | | | | L/318 | L/239 | L/191 | | | | L/661 | L/496 | L/396 | L/330 | L/248 | L/198 |
| 23 | Vertical (lb) | | | | | | | | | | | 2645 | 2373 | | | | | 6698 | 6450 | 6217 | 5773 | 4279 | |
| | Defl. Ratio | | | | | | | | | | | L/278 | L/209 | | | | | L/578 | L/434 | L/347 | L/289 | L/217 | |
| 24 | Vertical (lb) | | | | | | | | | | | 2347 | 1978 | | | | | 6047 | 5807 | 5582 | 4892 | 3460 | |
| | Defl. Ratio | | | | | | | | | | | L/245 | L/184 | | | | | L/509 | L/382 | L/305 | L/254 | L/191 | |
| 25 | Vertical (lb) | | | | | | | | | | | 2086 | | | | | | 5465 | 5234 | 4885 | 4126 | | |
| | Defl. Ratio | | | | | | | | | | | L/217 | | | | | | L/450 | L/338 | L/270 | L/225 | | |
| 26 | Vertical (lb) | | | | | | | | | | | 1824 | | | | | | 4945 | 4721 | 4186 | 3459 | | |
| | Defl. Ratio | | | | | | | | | | | L/193 | | | | | | L/400 | L/300 | L/240 | L/200 | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | 4479 | 4264 | 3575 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/357 | L/268 | L/214 | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | 4063 | 3766 | 3040 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/320 | L/240 | L/192 | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | 3690 | 3268 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/288 | L/216 | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 3356 | 2828 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/261 | L/195 | | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft).
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86S1-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the stud. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - **No notching is permitted.**
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL STUD DESIGN TABLE** **2250$F_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of stud only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] | | | | 1-1/2" x 5-1/2" [5] | | | | | | 1-1/2" x 7-1/4" [5] | | | | | | 1-1/2" x 9-1/4" [6] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Specified lateral load (plf) | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | |
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/744 | L/558 | L/447 | L/372 | L/2888 | L/2166 | L/1733 | L/1444 | L/1083 | L/867 | L/6616 | L/4962 | L/3970 | L/3308 | L/2481 | L/1985 | L/13741 | L/10305 | L/8244 | L/6870 | L/5153 | L/4122 |
| 9 | Vertical (lb) | 2560 | 2560 | 2560 | 2250 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/523 | L/392 | L/314 | L/261 | L/2029 | L/1521 | L/1217 | L/1014 | L/761 | L/609 | L/4647 | L/3485 | L/2788 | L/2323 | L/1742 | L/1394 | L/9650 | L/7238 | L/5790 | L/4825 | L/3619 | L/2895 |
| 10 | Vertical (lb) | 2238 | 2144 | 1788 | 1055 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/381 | L/286 | L/229 | L/191 | L/1479 | L/1109 | L/887 | L/739 | L/555 | L/444 | L/3387 | L/2541 | L/2032 | L/1694 | L/1270 | L/1016 | L/7035 | L/5276 | L/4221 | L/3518 | L/2638 | L/2111 |
| 11 | Vertical (lb) | 1740 | 1611 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/286 | L/215 | | | L/1111 | L/833 | L/667 | L/556 | L/417 | L/333 | L/2545 | L/1909 | L/1527 | L/1272 | L/954 | L/763 | L/5286 | L/3964 | L/3171 | L/2643 | L/1982 | L/1586 |
| 12 | Vertical (lb) | 1367 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 2270 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/221 | | | | L/856 | L/642 | L/514 | L/428 | L/321 | L/257 | L/1960 | L/1470 | L/1176 | L/980 | L/735 | L/588 | L/4071 | L/3053 | L/2443 | L/2036 | L/1527 | L/1221 |
| 13 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 2597 | 521 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/673 | L/505 | L/404 | L/337 | L/252 | L/202 | L/1542 | L/1156 | L/925 | L/771 | L/578 | L/463 | L/3202 | L/2402 | L/1921 | L/1601 | L/1201 | L/961 |
| 14 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 3377 | 1118 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/539 | L/404 | L/323 | L/269 | L/202 | | L/1234 | L/926 | L/741 | L/617 | L/463 | L/370 | L/2564 | L/1923 | L/1538 | L/1282 | L/961 | L/769 |
| 15 | Vertical (lb) | | | | | 3931 | 3770 | 3311 | 2097 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/438 | L/329 | L/263 | L/219 | | | L/1004 | L/753 | L/602 | L/502 | L/376 | L/301 | L/2084 | L/1563 | L/1251 | L/1042 | L/782 | L/625 |
| 16 | Vertical (lb) | | | | | 3333 | 3185 | 2209 | 1037 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 4464 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/361 | L/271 | L/217 | L/181 | | | L/827 | L/620 | L/496 | L/413 | L/310 | L/248 | L/1718 | L/1288 | L/1031 | L/859 | L/644 | L/515 |
| 17 | Vertical (lb) | | | | | 2838 | 2524 | 1294 | | | | 5304 | 5304 | 5304 | 5304 | 5300 | 2601 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/301 | L/226 | L/181 | | | | L/689 | L/517 | L/414 | L/345 | L/259 | L/207 | L/1432 | L/1074 | L/859 | L/716 | L/537 | L/430 |
| 18 | Vertical (lb) | | | | | 2427 | 1718 | | | | | 5304 | 5304 | 5304 | 5304 | 3644 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/254 | L/190 | | | | | L/581 | L/436 | L/348 | L/290 | L/218 | | L/1206 | L/905 | L/724 | L/603 | L/452 | L/362 |
| 19 | Vertical (lb) | | | | | 2084 | | | | | | 5304 | 5304 | 5265 | 5009 | 2207 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/216 | | | | | | L/494 | L/370 | L/296 | L/247 | L/185 | | L/1026 | L/769 | L/615 | L/513 | L/385 | L/308 |
| 20 | Vertical (lb) | | | | | 1695 | | | | | | 5014 | 4802 | 4606 | 3794 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/423 | L/318 | L/254 | L/212 | | | L/879 | L/660 | L/528 | L/440 | L/330 | L/264 |
| 21 | Vertical (lb) | | | | | | | | | | | 4424 | 4223 | 3963 | 2655 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 5940 |
| | Defl. Ratio | | | | | | | | | | | L/366 | L/274 | L/219 | L/183 | | | L/760 | L/570 | L/456 | L/380 | L/285 | L/228 |
| 22 | Vertical (lb) | | | | | | | | | | | 3913 | 3723 | 3149 | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 4090 |
| | Defl. Ratio | | | | | | | | | | | L/318 | L/239 | L/191 | | | | L/661 | L/496 | L/396 | L/330 | L/248 | L/198 |
| 23 | Vertical (lb) | | | | | | | | | | | 3469 | 3290 | | | | | 6767 | 6767 | 6767 | 6767 | 5799 | |
| | Defl. Ratio | | | | | | | | | | | L/278 | L/209 | | | | | L/578 | L/434 | L/347 | L/289 | L/217 | |
| 24 | Vertical (lb) | | | | | | | | | | | 3083 | 2808 | | | | | 6767 | 6767 | 6767 | 6495 | 4275 | |
| | Defl. Ratio | | | | | | | | | | | L/245 | L/184 | | | | | L/509 | L/382 | L/305 | L/254 | L/191 | |
| 25 | Vertical (lb) | | | | | | | | | | | 2746 | | | | | | 6711 | 6428 | 6169 | 5569 | | |
| | Defl. Ratio | | | | | | | | | | | L/217 | | | | | | L/450 | L/338 | L/270 | L/225 | | |
| 26 | Vertical (lb) | | | | | | | | | | | 2452 | | | | | | 6077 | 5806 | 5544 | 4761 | | |
| | Defl. Ratio | | | | | | | | | | | L/193 | | | | | | L/400 | L/300 | L/240 | L/200 | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | 5511 | 5252 | 4805 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/357 | L/268 | L/214 | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | 5004 | 4757 | 4156 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/320 | L/240 | L/192 | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | 4551 | 4315 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/288 | L/216 | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 4145 | 3803 | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/261 | L/195 | | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86S1-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the stud height. A hole is permitted at the lower or upper third of the stud only. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - No notching is permitted in the middle third of the stud height. A notch is permitted at the lower or upper third of the stud only. The notch depth must not exceed 7/8" for 3-1/2" studs, and 1-3/8" for 5-1/2" or larger studs. Only one notch or one hole is premitted at each end of the stud.
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL STUD DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of stud only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] | | | | 1-1/2" x 5-1/2" [5] | | | | | | 1-1/2" x 7-1/4" [5] | | | | | | 1-1/2" x 9-1/4" [6] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Specified lateral load (plf) | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | | Specified lateral load (plf) | | | | | |
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/992 | L/744 | L/595 | L/496 | L/3851 | L/2888 | L/2311 | L/1926 | L/1444 | L/1155 | L/8821 | L/6616 | L/5293 | L/4411 | L/3308 | L/2646 | L/18321 | L/13741 | L/10992 | L/9160 | L/6870 | L/5496 |
| 9 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/697 | L/523 | L/418 | L/349 | L/2705 | L/2029 | L/1623 | L/1352 | L/1014 | L/811 | L/6195 | L/4647 | L/3717 | L/3098 | L/2323 | L/1859 | L/12867 | L/9650 | L/7720 | L/6434 | L/4825 | L/3860 |
| 10 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/508 | L/381 | L/305 | L/254 | L/1972 | L/1479 | L/1183 | L/986 | L/739 | L/592 | L/4516 | L/3387 | L/2710 | L/2258 | L/1694 | L/1355 | L/9380 | L/7035 | L/5628 | L/4690 | L/3518 | L/2814 |
| 11 | Vertical (lb) | 2412 | 2320 | 2235 | 2130 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/382 | L/286 | L/229 | L/191 | L/1481 | L/1111 | L/889 | L/741 | L/556 | L/444 | L/3393 | L/2545 | L/2036 | L/1697 | L/1272 | L/1018 | L/7047 | L/5286 | L/4228 | L/3524 | L/2643 | L/2114 |
| 12 | Vertical (lb) | 1903 | 1821 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/294 | L/221 | | | L/1141 | L/856 | L/685 | L/571 | L/428 | L/342 | L/2614 | L/1960 | L/1568 | L/1307 | L/980 | L/784 | L/5428 | L/4071 | L/3257 | L/2714 | L/2036 | L/1629 |
| 13 | Vertical (lb) | 1517 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/231 | | | | L/898 | L/673 | L/539 | L/449 | L/337 | L/269 | L/2056 | L/1542 | L/1233 | L/1028 | L/771 | L/617 | L/4270 | L/3202 | L/2562 | L/2135 | L/1601 | L/1281 |
| 14 | Vertical (lb) | 1222 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/185 | | | | L/719 | L/539 | L/431 | L/359 | L/269 | L/216 | L/1646 | L/1234 | L/988 | L/823 | L/617 | L/494 | L/3418 | L/2564 | L/2051 | L/1709 | L/1282 | L/1026 |
| 15 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 4024 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/584 | L/438 | L/351 | L/292 | L/219 | | L/1338 | L/1004 | L/803 | L/669 | L/502 | L/401 | L/2779 | L/2084 | L/1668 | L/1390 | L/1042 | L/834 |
| 16 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 3412 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/481 | L/361 | L/289 | L/241 | L/181 | | L/1103 | L/827 | L/662 | L/551 | L/413 | L/331 | L/2290 | L/1718 | L/1374 | L/1145 | L/859 | L/687 |
| 17 | Vertical (lb) | | | | | 3939 | 3786 | 3644 | 3434 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/401 | L/301 | L/241 | L/201 | | | L/919 | L/689 | L/552 | L/460 | L/345 | L/276 | L/1909 | L/1432 | L/1146 | L/955 | L/716 | L/573 |
| 18 | Vertical (lb) | | | | | 3377 | 3235 | 3104 | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/338 | L/254 | L/203 | | | | L/774 | L/581 | L/465 | L/387 | L/290 | L/232 | L/1608 | L/1206 | L/965 | L/804 | L/603 | L/483 |
| 19 | Vertical (lb) | | | | | 2908 | 2777 | | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/287 | L/216 | | | | | L/658 | L/494 | L/395 | L/329 | L/247 | L/198 | L/1368 | L/1026 | L/821 | L/684 | L/513 | L/410 |
| 20 | Vertical (lb) | | | | | 2514 | 2393 | | | | | 5304 | 5304 | 5304 | 5304 | 5304 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/246 | L/185 | | | | | L/565 | L/423 | L/339 | L/282 | L/212 | | L/1173 | L/879 | L/704 | L/586 | L/440 | L/352 |
| 21 | Vertical (lb) | | | | | 2183 | | | | | | 5304 | 5304 | 5304 | 5304 | 4442 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/213 | | | | | | L/488 | L/366 | L/293 | L/244 | L/183 | | L/1013 | L/760 | L/608 | L/506 | L/380 | L/304 |
| 22 | Vertical (lb) | | | | | 1904 | | | | | | 5304 | 5219 | 5024 | 4747 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/424 | L/318 | L/254 | L/212 | | | L/881 | L/661 | L/529 | L/440 | L/330 | L/264 |
| 23 | Vertical (lb) | | | | | | | | | | | 4824 | 4625 | 4441 | 3980 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | | | | | | | L/371 | L/278 | L/223 | L/186 | | | L/771 | L/578 | L/463 | L/385 | L/289 | L/231 |
| 24 | Vertical (lb) | | | | | | | | | | | 4296 | 4108 | 3894 | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | | | | | | | L/327 | L/245 | L/196 | | | | L/679 | L/509 | L/407 | L/339 | L/254 | L/204 |
| 25 | Vertical (lb) | | | | | | | | | | | 3835 | 3658 | | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 5834 |
| | Defl. Ratio | | | | | | | | | | | L/289 | L/217 | | | | | L/600 | L/450 | L/360 | L/300 | L/225 | L/180 |
| 26 | Vertical (lb) | | | | | | | | | | | 3433 | 3265 | | | | | 6767 | 6767 | 6767 | 6767 | 6265 | |
| | Defl. Ratio | | | | | | | | | | | L/257 | L/193 | | | | | L/534 | L/400 | L/320 | L/267 | L/200 | |
| 27 | Vertical (lb) | | | | | | | | | | | 3079 | | | | | | 6767 | 6767 | 6767 | 6767 | | |
| | Defl. Ratio | | | | | | | | | | | L/229 | | | | | | L/477 | L/357 | L/286 | L/238 | | |
| 28 | Vertical (lb) | | | | | | | | | | | 2769 | | | | | | 6767 | 6675 | 6421 | 5986 | | |
| | Defl. Ratio | | | | | | | | | | | L/206 | | | | | | L/427 | L/320 | L/256 | L/214 | | |
| 29 | Vertical (lb) | | | | | | | | | | | 2496 | | | | | | 6331 | 6068 | 5826 | 5205 | | |
| | Defl. Ratio | | | | | | | | | | | L/185 | | | | | | L/385 | L/288 | L/231 | L/192 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 5776 | 5525 | 5272 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/347 | L/261 | L/208 | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the stud height**. A hole is permitted at the lower or upper third of the stud only. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - **No notching is permitted.**
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL STUD DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] Specified lateral load (plf) | | | | 1-1/2" x 5-1/2" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 7-1/4" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 9-1/4" [6] Specified lateral load (plf) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/992 | L/744 | L/595 | L/496 | L/3851 | L/2888 | L/2311 | L/1926 | L/1444 | L/1155 | L/8821 | L/6616 | L/5293 | L/4411 | L/3308 | L/2646 | L/18321 | L/13741 | L/10992 | L/9160 | L/6870 | L/5496 |
| 9 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/697 | L/523 | L/418 | L/349 | L/2705 | L/2029 | L/1623 | L/1352 | L/1014 | L/811 | L/6195 | L/4647 | L/3717 | L/3098 | L/2323 | L/1859 | L/12867 | L/9650 | L/7720 | L/6434 | L/4825 | L/3860 |
| 10 | Vertical (lb) | 2153 | 2088 | 2026 | 1967 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/508 | L/381 | L/305 | L/254 | L/1972 | L/1479 | L/1183 | L/986 | L/739 | L/592 | L/4516 | L/3387 | L/2710 | L/2258 | L/1694 | L/1355 | L/9380 | L/7035 | L/5628 | L/4690 | L/3518 | L/2814 |
| 11 | Vertical (lb) | 1677 | 1618 | 1562 | 1408 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/382 | L/286 | L/229 | L/191 | L/1481 | L/1111 | L/889 | L/741 | L/556 | L/444 | L/3393 | L/2545 | L/2036 | L/1697 | L/1272 | L/1018 | L/7047 | L/5286 | L/4228 | L/3524 | L/2643 | L/2114 |
| 12 | Vertical (lb) | 1320 | 1266 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/294 | L/221 | | | L/1141 | L/856 | L/685 | L/571 | L/428 | L/342 | L/2614 | L/1960 | L/1568 | L/1307 | L/980 | L/784 | L/5428 | L/4071 | L/3257 | L/2714 | L/2036 | L/1629 |
| 13 | Vertical (lb) | 1049 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/231 | | | | L/898 | L/673 | L/539 | L/449 | L/337 | L/269 | L/2056 | L/1542 | L/1233 | L/1028 | L/771 | L/617 | L/4270 | L/3202 | L/2562 | L/2135 | L/1601 | L/1281 |
| 14 | Vertical (lb) | 842 | | | | 4024 | 4024 | 4024 | 4024 | 3808 | 3063 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/185 | | | | L/719 | L/539 | L/431 | L/359 | L/269 | L/216 | L/1646 | L/1234 | L/988 | L/823 | L/617 | L/494 | L/3418 | L/2564 | L/2051 | L/1709 | L/1282 | L/1026 |
| 15 | Vertical (lb) | | | | | 3737 | 3630 | 3526 | 3427 | 2888 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/584 | L/438 | L/351 | L/292 | L/219 | | L/1338 | L/1004 | L/803 | L/669 | L/502 | L/401 | L/2779 | L/2084 | L/1668 | L/1390 | L/1042 | L/834 |
| 16 | Vertical (lb) | | | | | 3175 | 3073 | 2975 | 2872 | 2156 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/481 | L/361 | L/289 | L/241 | L/181 | | L/1103 | L/827 | L/662 | L/551 | L/413 | L/331 | L/2290 | L/1718 | L/1374 | L/1145 | L/859 | L/687 |
| 17 | Vertical (lb) | | | | | 2707 | 2611 | 2519 | 2243 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/401 | L/301 | L/241 | L/201 | | | L/919 | L/689 | L/552 | L/460 | L/345 | L/276 | L/1909 | L/1432 | L/1146 | L/955 | L/716 | L/573 |
| 18 | Vertical (lb) | | | | | 2318 | 2227 | 2077 | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 4721 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/338 | L/254 | L/203 | | | | L/774 | L/581 | L/465 | L/387 | L/290 | L/232 | L/1608 | L/1206 | L/965 | L/804 | L/603 | L/483 |
| 19 | Vertical (lb) | | | | | 1992 | 1907 | | | | | 5304 | 5304 | 5304 | 5304 | 4737 | 3670 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/287 | L/216 | | | | | L/658 | L/494 | L/395 | L/329 | L/247 | L/198 | L/1368 | L/1026 | L/821 | L/684 | L/513 | L/410 |
| 20 | Vertical (lb) | | | | | 1720 | 1616 | | | | | 5299 | 5128 | 4965 | 4810 | 3807 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/246 | L/185 | | | | | L/565 | L/423 | L/339 | L/282 | L/212 | | L/1173 | L/879 | L/704 | L/586 | L/440 | L/352 |
| 21 | Vertical (lb) | | | | | 1490 | | | | | | 4680 | 4517 | 4362 | 4089 | 3028 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/213 | | | | | | L/488 | L/366 | L/293 | L/244 | L/183 | | L/1013 | L/760 | L/608 | L/506 | L/380 | L/304 |
| 22 | Vertical (lb) | | | | | 1297 | | | | | | 4143 | 3987 | 3839 | 3381 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/424 | L/318 | L/254 | L/212 | | | L/881 | L/661 | L/529 | L/440 | L/330 | L/264 |
| 23 | Vertical (lb) | | | | | | | | | | | 3676 | 3528 | 3304 | 2780 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6084 |
| | Defl. Ratio | | | | | | | | | | | L/371 | L/278 | L/223 | L/186 | | | L/771 | L/578 | L/463 | L/385 | L/289 | L/231 |
| 24 | Vertical (lb) | | | | | | | | | | | 3269 | 3128 | 2768 | | | | 6767 | 6767 | 6767 | 6767 | 6445 | 4971 |
| | Defl. Ratio | | | | | | | | | | | L/327 | L/245 | L/196 | | | | L/679 | L/509 | L/407 | L/339 | L/254 | L/204 |
| 25 | Vertical (lb) | | | | | | | | | | | 2914 | 2780 | | | | | 6767 | 6767 | 6767 | 6767 | 5421 | 4011 |
| | Defl. Ratio | | | | | | | | | | | L/289 | L/217 | | | | | L/600 | L/450 | L/360 | L/300 | L/225 | L/180 |
| 26 | Vertical (lb) | | | | | | | | | | | 2604 | 2403 | | | | | 6767 | 6603 | 6373 | 6036 | 4532 | |
| | Defl. Ratio | | | | | | | | | | | L/257 | L/193 | | | | | L/534 | L/400 | L/320 | L/267 | L/200 | |
| 27 | Vertical (lb) | | | | | | | | | | | 2333 | | | | | | 6213 | 5979 | 5757 | 5199 | | |
| | Defl. Ratio | | | | | | | | | | | L/229 | | | | | | L/477 | L/357 | L/286 | L/238 | | |
| 28 | Vertical (lb) | | | | | | | | | | | 2094 | | | | | | 5645 | 5420 | 5208 | 4465 | | |
| | Defl. Ratio | | | | | | | | | | | L/206 | | | | | | L/427 | L/320 | L/256 | L/214 | | |
| 29 | Vertical (lb) | | | | | | | | | | | 1884 | | | | | | 5137 | 4921 | 4551 | 3821 | | |
| | Defl. Ratio | | | | | | | | | | | L/185 | | | | | | L/385 | L/288 | L/231 | L/192 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 4682 | 4474 | 3956 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/347 | L/261 | L/208 | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the stud. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - **No notching is permitted.**
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL STUD DESIGN TABLE** **2950F$_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of stud only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 1-1/2" x 3-1/2" [5] Specified lateral load (plf) | | | | 1-1/2" x 5-1/2" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 7-1/4" [5] Specified lateral load (plf) | | | | | | 1-1/2" x 9-1/4" [6] Specified lateral load (plf) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 | 20 | 25 | 30 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 | 15 | 20 | 25 | 30 | 40 | 50 |
| 8 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/992 | L/744 | L/595 | L/496 | L/3851 | L/2888 | L/2311 | L/1926 | L/1444 | L/1155 | L/8821 | L/6616 | L/5293 | L/4411 | L/3308 | L/2646 | L/18321 | L/13741 | L/10992 | L/9160 | L/6870 | L/5496 |
| 9 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/697 | L/523 | L/418 | L/349 | L/2705 | L/2029 | L/1623 | L/1352 | L/1014 | L/811 | L/6195 | L/4647 | L/3717 | L/3098 | L/2323 | L/1859 | L/12867 | L/9650 | L/7720 | L/6434 | L/4825 | L/3860 |
| 10 | Vertical (lb) | 2560 | 2560 | 2560 | 2560 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/508 | L/381 | L/305 | L/254 | L/1972 | L/1479 | L/1183 | L/986 | L/739 | L/592 | L/4516 | L/3387 | L/2710 | L/2258 | L/1694 | L/1355 | L/9380 | L/7035 | L/5628 | L/4690 | L/3518 | L/2814 |
| 11 | Vertical (lb) | 2412 | 2320 | 2235 | 1568 | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/382 | L/286 | L/229 | L/191 | L/1481 | L/1111 | L/889 | L/741 | L/556 | L/444 | L/3393 | L/2545 | L/2036 | L/1697 | L/1272 | L/1018 | L/7047 | L/5286 | L/4228 | L/3524 | L/2643 | L/2114 |
| 12 | Vertical (lb) | 1903 | 1821 | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/294 | L/221 | | | L/1141 | L/856 | L/685 | L/571 | L/428 | L/342 | L/2614 | L/1960 | L/1568 | L/1307 | L/980 | L/784 | L/5428 | L/4071 | L/3257 | L/2714 | L/2036 | L/1629 |
| 13 | Vertical (lb) | 1517 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 4024 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/231 | | | | L/898 | L/673 | L/539 | L/449 | L/337 | L/269 | L/2056 | L/1542 | L/1233 | L/1028 | L/771 | L/617 | L/4270 | L/3202 | L/2562 | L/2135 | L/1601 | L/1281 |
| 14 | Vertical (lb) | 1222 | | | | 4024 | 4024 | 4024 | 4024 | 4024 | 2043 | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | L/185 | | | | L/719 | L/539 | L/431 | L/359 | L/269 | L/216 | L/1646 | L/1234 | L/988 | L/823 | L/617 | L/494 | L/3418 | L/2564 | L/2051 | L/1709 | L/1282 | L/1026 |
| 15 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 4024 | 2658 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/584 | L/438 | L/351 | L/292 | L/219 | | L/1338 | L/1004 | L/803 | L/669 | L/502 | L/401 | L/2779 | L/2084 | L/1668 | L/1390 | L/1042 | L/834 |
| 16 | Vertical (lb) | | | | | 4024 | 4024 | 4024 | 3673 | 1240 | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/481 | L/361 | L/289 | L/241 | L/181 | | L/1103 | L/827 | L/662 | L/551 | L/413 | L/331 | L/2290 | L/1718 | L/1374 | L/1145 | L/859 | L/687 |
| 17 | Vertical (lb) | | | | | 3939 | 3786 | 3644 | 2416 | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/401 | L/301 | L/241 | L/201 | | | L/919 | L/689 | L/552 | L/460 | L/345 | L/276 | L/1909 | L/1432 | L/1146 | L/955 | L/716 | L/573 |
| 18 | Vertical (lb) | | | | | 3377 | 3235 | 2616 | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 5304 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/338 | L/254 | L/203 | | | | L/774 | L/581 | L/465 | L/387 | L/290 | L/232 | L/1608 | L/1206 | L/965 | L/804 | L/603 | L/483 |
| 19 | Vertical (lb) | | | | | 2908 | 2777 | | | | | 5304 | 5304 | 5304 | 5304 | 5304 | 3656 | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/287 | L/216 | | | | | L/658 | L/494 | L/395 | L/329 | L/247 | L/198 | L/1368 | L/1026 | L/821 | L/684 | L/513 | L/410 |
| 20 | Vertical (lb) | | | | | 2514 | 2183 | | | | | 5304 | 5304 | 5304 | 5304 | 4889 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/246 | L/185 | | | | | L/565 | L/423 | L/339 | L/282 | L/212 | | L/1173 | L/879 | L/704 | L/586 | L/440 | L/352 |
| 21 | Vertical (lb) | | | | | 2183 | | | | | | 5304 | 5304 | 5304 | 5304 | 3364 | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/213 | | | | | | L/488 | L/366 | L/293 | L/244 | L/183 | | L/1013 | L/760 | L/608 | L/506 | L/380 | L/304 |
| 22 | Vertical (lb) | | | | | 1904 | | | | | | 5304 | 5219 | 5024 | 4747 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | L/185 | | | | | | L/424 | L/318 | L/254 | L/212 | | | L/881 | L/661 | L/529 | L/440 | L/330 | L/264 |
| 23 | Vertical (lb) | | | | | | | | | | | 4824 | 4625 | 4441 | 3885 | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6767 |
| | Defl. Ratio | | | | | | | | | | | L/371 | L/278 | L/223 | L/186 | | | L/771 | L/578 | L/463 | L/385 | L/289 | L/231 |
| 24 | Vertical (lb) | | | | | | | | | | | 4296 | 4108 | 3894 | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 6623 |
| | Defl. Ratio | | | | | | | | | | | L/327 | L/245 | L/196 | | | | L/679 | L/509 | L/407 | L/339 | L/254 | L/204 |
| 25 | Vertical (lb) | | | | | | | | | | | 3835 | 3658 | | | | | 6767 | 6767 | 6767 | 6767 | 6767 | 4777 |
| | Defl. Ratio | | | | | | | | | | | L/289 | L/217 | | | | | L/600 | L/450 | L/360 | L/300 | L/225 | L/180 |
| 26 | Vertical (lb) | | | | | | | | | | | 3433 | 3265 | | | | | 6767 | 6767 | 6767 | 6767 | 6265 | |
| | Defl. Ratio | | | | | | | | | | | L/257 | L/193 | | | | | L/534 | L/400 | L/320 | L/267 | L/200 | |
| 27 | Vertical (lb) | | | | | | | | | | | 3079 | | | | | | 6767 | 6767 | 6767 | 6767 | | |
| | Defl. Ratio | | | | | | | | | | | L/229 | | | | | | L/477 | L/357 | L/286 | L/238 | | |
| 28 | Vertical (lb) | | | | | | | | | | | 2769 | | | | | | 6767 | 6675 | 6421 | 5986 | | |
| | Defl. Ratio | | | | | | | | | | | L/206 | | | | | | L/427 | L/320 | L/256 | L/214 | | |
| 29 | Vertical (lb) | | | | | | | | | | | 2496 | | | | | | 6331 | 6068 | 5826 | 5205 | | |
| | Defl. Ratio | | | | | | | | | | | L/185 | | | | | | L/385 | L/288 | L/231 | L/192 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | 5776 | 5525 | 5272 | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | L/347 | L/261 | L/208 | | | |

Notes:

1. To calculate the specified lateral wind load, multiply the design wind pressure from Table 1 by the stud spacing (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0 and a system factor in bending of 1.04.
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the stud height. A hole is permitted at the lower or upper third of the stud only. The hole diameter must not exceed 1-1/8" for 3-1/2" studs, and 1-13/16" for 5-1/2" or larger studs. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the stud.
   - No notching is permitted in the middle third of the stud height. A notch is permitted at the lower or upper third of the stud only. The notch depth must not exceed 7/8" for 3-1/2" studs, and 1-3/8" for 5-1/2" or larger studs. Only one notch or one hole is premitted at each end of the stud.
5. 3-1/2" to 7-1/4" studs require wood-based panel sheathing on at least one side and full-depth blocking at 8' on centre.
6. 9-1/4" studs require wood-based panel sheathing on one side, gypsum board or wood-based panel sheathing on the opposite side, and full-depth blocking at 8' on centre.

**LVL COLUMN DESIGN TABLE** **2250$F_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 4397 | 2627 | 5974 | 5563 | 3910 | 9359 | 8724 | 7927 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/558 | L/279 | L/186 | L/651 | L/326 | L/217 | L/955 | L/478 | L/318 | L/1444 | L/722 | L/481 | L/1685 | L/842 | L/562 | L/2527 | L/1264 | L/842 |
| 9 | Vertical (lb) | 3912 | 2681 | | 4653 | 3725 | | 7147 | 6550 | 4895 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/392 | L/196 | | L/457 | L/229 | | L/671 | L/335 | L/224 | L/1014 | L/507 | L/338 | L/1183 | L/592 | L/394 | L/1775 | L/888 | L/592 |
| 10 | Vertical (lb) | 2987 | | | 3567 | | | 5492 | 4716 | | 8047 | 8047 | 6213 | 9388 | 9388 | 9227 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/333 | | | L/489 | L/245 | | L/739 | L/370 | L/246 | L/863 | L/431 | L/288 | L/1294 | L/647 | L/431 |
| 11 | Vertical (lb) | 2286 | | | 2756 | | | 4260 | 3104 | | 8047 | 7260 | 3300 | 9388 | 9388 | 5739 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/215 | | | L/251 | | | L/367 | L/184 | | L/556 | L/278 | L/185 | L/648 | L/324 | L/216 | L/972 | L/486 | L/324 |
| 12 | Vertical (lb) | | | | 2123 | | | 3338 | | | 8047 | 4833 | | 9388 | 7040 | | 14083 | 14083 | 10561 |
| | Defl. Ratio | | | | L/193 | | | L/283 | | | L/428 | L/214 | | L/499 | L/250 | | L/749 | L/374 | L/250 |
| 13 | Vertical (lb) | | | | | | | 2643 | | | 6943 | | | 8308 | 4764 | | 13119 | 11546 | 7147 |
| | Defl. Ratio | | | | | | | L/223 | | | L/337 | | | L/393 | L/196 | | L/589 | L/294 | L/196 |
| 14 | Vertical (lb) | | | | | | | | | | 5582 | | | 6937 | | | 11037 | 8620 | |
| | Defl. Ratio | | | | | | | | | | L/269 | | | L/314 | | | L/472 | L/236 | |
| 15 | Vertical (lb) | | | | | | | | | | 4217 | | | 5676 | | | 9303 | 6305 | |
| | Defl. Ratio | | | | | | | | | | L/219 | | | L/256 | | | L/383 | L/192 | |
| 16 | Vertical (lb) | | | | | | | | | | 3132 | | | 4361 | | | 7863 | | |
| | Defl. Ratio | | | | | | | | | | L/181 | | | L/211 | | | L/316 | | |
| 17 | Vertical (lb) | | | | | | | | | | | | | | | | 6668 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/263 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | | | | 5675 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/222 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 4596 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/189 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the column. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2250F$_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3308 | L/1654 | L/1103 | L/3859 | L/1930 | L/1286 | L/5789 | L/2894 | L/1930 | L/7719 | L/3859 | L/2573 | L/6870 | L/3435 | L/2290 | L/8015 | L/4008 | L/2672 | L/12023 | L/6011 | L/4008 | L/16031 | L/8015 | L/5344 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2323 | L/1162 | L/774 | L/2711 | L/1355 | L/904 | L/4066 | L/2033 | L/1355 | L/5421 | L/2711 | L/1807 | L/4825 | L/2413 | L/1608 | L/5629 | L/2815 | L/1876 | L/8444 | L/4222 | L/2815 | L/11259 | L/5629 | L/3753 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1694 | L/847 | L/565 | L/1976 | L/988 | L/659 | L/2964 | L/1482 | L/988 | L/3952 | L/1976 | L/1317 | L/3518 | L/1759 | L/1173 | L/4104 | L/2052 | L/1368 | L/6156 | L/3078 | L/2052 | L/8208 | L/4104 | L/2736 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1272 | L/636 | L/424 | L/1485 | L/742 | L/495 | L/2227 | L/1113 | L/742 | L/2969 | L/1485 | L/990 | L/2643 | L/1321 | L/881 | L/3083 | L/1542 | L/1028 | L/4625 | L/2312 | L/1542 | L/6167 | L/3083 | L/2056 |
| 12 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/980 | L/490 | L/327 | L/1143 | L/572 | L/381 | L/1715 | L/858 | L/572 | L/2287 | L/1143 | L/762 | L/2036 | L/1018 | L/679 | L/2375 | L/1187 | L/792 | L/3562 | L/1781 | L/1187 | L/4750 | L/2375 | L/1583 |
| 13 | Vertical (lb) | 10608 | 10608 | 9032 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/771 | L/385 | L/257 | L/899 | L/450 | L/300 | L/1349 | L/675 | L/450 | L/1799 | L/899 | L/600 | L/1601 | L/801 | L/534 | L/1868 | L/934 | L/623 | L/2802 | L/1401 | L/934 | L/3736 | L/1868 | L/1245 |
| 14 | Vertical (lb) | 10608 | 10608 | 5656 | 12376 | 12376 | 9410 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/617 | L/309 | L/206 | L/720 | L/360 | L/240 | L/1080 | L/540 | L/360 | L/1440 | L/720 | L/480 | L/1282 | L/641 | L/427 | L/1496 | L/748 | L/499 | L/2243 | L/1122 | L/748 | L/2991 | L/1496 | L/997 |
| 15 | Vertical (lb) | 10608 | 8580 | | 12376 | 12141 | 6101 | 18563 | 18563 | 18212 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/502 | L/251 | | L/585 | L/293 | L/195 | L/878 | L/439 | L/293 | L/1171 | L/585 | L/390 | L/1042 | L/521 | L/347 | L/1216 | L/608 | L/405 | L/1824 | L/912 | L/608 | L/2432 | L/1216 | L/811 |
| 16 | Vertical (lb) | 10608 | 6124 | | 12376 | 9179 | | 18563 | 18563 | 13769 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/413 | L/207 | | L/482 | L/241 | | L/724 | L/362 | L/241 | L/965 | L/482 | L/322 | L/859 | L/429 | L/286 | L/1002 | L/501 | L/334 | L/1503 | L/751 | L/501 | L/2004 | L/1002 | L/668 |
| 17 | Vertical (lb) | 10231 | | | 12266 | 6735 | | 18563 | 16607 | 10102 | 24751 | 24532 | 19832 | 13534 | 13534 | 9905 | 15790 | 15790 | 15492 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/345 | | | L/402 | L/201 | | L/603 | L/302 | L/201 | L/804 | L/402 | L/268 | L/716 | L/358 | L/239 | L/835 | L/418 | L/278 | L/1253 | L/626 | L/418 | L/1671 | L/835 | L/557 |
| 18 | Vertical (lb) | 8572 | | | 10680 | | | 17036 | 13266 | | 23442 | 21360 | 15492 | 13534 | 13534 | 6534 | 15790 | 15790 | 11431 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/290 | | | L/339 | | | L/508 | L/254 | | L/678 | L/339 | L/226 | L/603 | L/302 | L/201 | L/704 | L/352 | L/235 | L/1056 | L/528 | L/352 | L/1407 | L/704 | L/469 |
| 19 | Vertical (lb) | 6927 | | | 9244 | | | 14938 | 10476 | | 20619 | 18488 | 11885 | 13534 | 11425 | | 15790 | 15790 | 7978 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/247 | | | L/288 | | | L/432 | L/216 | | L/576 | L/288 | L/192 | L/513 | L/256 | | L/598 | L/299 | L/199 | L/897 | L/449 | L/299 | L/1197 | L/598 | L/399 |
| 20 | Vertical (lb) | 5548 | | | 7576 | | | 13116 | 8150 | | 18162 | 15151 | | 13534 | 8747 | | 15790 | 13023 | | 23684 | 23684 | 19535 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/370 | L/185 | | L/494 | L/247 | | L/440 | L/220 | | L/513 | L/256 | | L/769 | L/385 | L/256 | L/1026 | L/513 | L/342 |
| 21 | Vertical (lb) | 4393 | | | 6170 | | | 11538 | | | 16028 | 12341 | | 13534 | 6463 | | 15790 | 10247 | | 23684 | 23684 | 15371 | 31579 | 31579 | 29428 |
| | Defl. Ratio | L/183 | | | L/213 | | | L/320 | | | L/427 | L/213 | | L/380 | L/190 | | L/443 | L/222 | | L/665 | L/332 | L/222 | L/886 | L/443 | L/295 |
| 22 | Vertical (lb) | | | | 4986 | | | 10169 | | | 14174 | 9972 | | 13172 | | | 15790 | 7870 | | 23684 | 20579 | 11805 | 31579 | 31579 | 24313 |
| | Defl. Ratio | | | | L/186 | | | L/278 | | | L/371 | L/186 | | L/330 | | | L/385 | L/193 | | L/578 | L/289 | L/193 | L/771 | L/385 | L/257 |
| 23 | Vertical (lb) | | | | | | | 8982 | | | 12562 | | | 11166 | | | 14324 | | | 22944 | 17168 | | 31579 | 28648 | 19892 |
| | Defl. Ratio | | | | | | | L/244 | | | L/325 | | | L/289 | | | L/337 | | | L/506 | L/253 | | L/675 | L/337 | L/225 |
| 24 | Vertical (lb) | | | | | | | 7693 | | | 11158 | | | 9421 | | | 12603 | | | 20684 | 14212 | | 28603 | 25205 | 16076 |
| | Defl. Ratio | | | | | | | L/214 | | | L/286 | | | L/254 | | | L/297 | | | L/445 | L/223 | | L/594 | L/297 | L/198 |
| 25 | Vertical (lb) | | | | | | | 6473 | | | 9935 | | | 7904 | | | 10765 | | | 18663 | 11652 | | 25875 | 21531 | |
| | Defl. Ratio | | | | | | | L/190 | | | L/253 | | | L/225 | | | L/263 | | | L/394 | L/197 | | L/525 | L/263 | |
| 26 | Vertical (lb) | | | | | | | | | | 8865 | | | 6585 | | | 9161 | | | 16858 | | | 23432 | 18323 | |
| | Defl. Ratio | | | | | | | | | | L/225 | | | L/200 | | | L/233 | | | L/350 | | | L/467 | L/233 | |
| 27 | Vertical (lb) | | | | | | | | | | 7929 | | | | | | 7761 | | | 15245 | | | 21246 | 15521 | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | | | | L/208 | | | L/313 | | | L/417 | L/208 | |
| 28 | Vertical (lb) | | | | | | | | | | 6864 | | | | | | 6537 | | | 13804 | | | 19290 | 13074 | |
| | Defl. Ratio | | | | | | | | | | L/180 | | | | | | L/187 | | | L/280 | | | L/374 | L/187 | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 12515 | | | 17538 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/252 | | | L/337 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 10987 | | | 15967 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/228 | | | L/304 | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the column. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2250F$_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 5121 | 4395 | 5974 | 5974 | 5974 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/558 | L/279 | L/186 | L/651 | L/326 | L/217 | L/955 | L/478 | L/318 | L/1444 | L/722 | L/481 | L/1685 | L/842 | L/562 | L/2527 | L/1264 | L/842 |
| 9 | Vertical (lb) | 5121 | 4202 | | 5974 | 5635 | | 9388 | 9282 | 7571 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/392 | L/196 | | L/457 | L/229 | | L/671 | L/335 | L/224 | L/1014 | L/507 | L/338 | L/1183 | L/592 | L/394 | L/1775 | L/888 | L/592 |
| 10 | Vertical (lb) | 4260 | | | 5095 | | | 7863 | 7028 | | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/333 | | | L/489 | L/245 | | L/739 | L/370 | L/246 | L/863 | L/431 | L/288 | L/1294 | L/647 | L/431 |
| 11 | Vertical (lb) | 3289 | | | 3948 | | | 6112 | 4836 | | 8047 | 8047 | 6531 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/215 | | | L/251 | | | L/367 | L/184 | | L/556 | L/278 | L/185 | L/648 | L/324 | L/216 | L/972 | L/486 | L/324 |
| 12 | Vertical (lb) | | | | 3091 | | | 4804 | | | 8047 | 7997 | | 9388 | 9388 | | 14083 | 14083 | 14083 |
| | Defl. Ratio | | | | L/193 | | | L/283 | | | L/428 | L/214 | | L/499 | L/250 | | L/749 | L/374 | L/250 |
| 13 | Vertical (lb) | | | | | | | 3817 | | | 8047 | | | 9388 | 7903 | | 14083 | 14083 | 11855 |
| | Defl. Ratio | | | | | | | L/223 | | | L/337 | | | L/393 | L/196 | | L/589 | L/294 | L/196 |
| 14 | Vertical (lb) | | | | | | | | | | 8047 | | | 9388 | | | 14083 | 13240 | |
| | Defl. Ratio | | | | | | | | | | L/269 | | | L/314 | | | L/472 | L/236 | |
| 15 | Vertical (lb) | | | | | | | | | | 6495 | | | 8341 | | | 13434 | 10035 | |
| | Defl. Ratio | | | | | | | | | | L/219 | | | L/256 | | | L/383 | L/192 | |
| 16 | Vertical (lb) | | | | | | | | | | 4990 | | | 6701 | | | 11366 | | |
| | Defl. Ratio | | | | | | | | | | L/181 | | | L/211 | | | L/316 | | |
| 17 | Vertical (lb) | | | | | | | | | | | | | | | | 9656 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/263 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | | | | 8237 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/222 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 7053 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/189 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the column height**. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2250F$_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3308 | L/1654 | L/1103 | L/3859 | L/1930 | L/1286 | L/5789 | L/2894 | L/1930 | L/7719 | L/3859 | L/2573 | L/6870 | L/3435 | L/2290 | L/8015 | L/4008 | L/2672 | L/12023 | L/6011 | L/4008 | L/16031 | L/8015 | L/5344 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2323 | L/1162 | L/774 | L/2711 | L/1355 | L/904 | L/4066 | L/2033 | L/1355 | L/5421 | L/2711 | L/1807 | L/4825 | L/2413 | L/1608 | L/5629 | L/2815 | L/1876 | L/8444 | L/4222 | L/2815 | L/11259 | L/5629 | L/3753 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1694 | L/847 | L/565 | L/1976 | L/988 | L/659 | L/2964 | L/1482 | L/988 | L/3952 | L/1976 | L/1317 | L/3518 | L/1759 | L/1173 | L/4104 | L/2052 | L/1368 | L/6156 | L/3078 | L/2052 | L/8208 | L/4104 | L/2736 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1272 | L/636 | L/424 | L/1485 | L/742 | L/495 | L/2227 | L/1113 | L/742 | L/2969 | L/1485 | L/990 | L/2643 | L/1321 | L/881 | L/3083 | L/1542 | L/1028 | L/4625 | L/2312 | L/1542 | L/6167 | L/3083 | L/2056 |
| 12 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/980 | L/490 | L/327 | L/1143 | L/572 | L/381 | L/1715 | L/858 | L/572 | L/2287 | L/1143 | L/762 | L/2036 | L/1018 | L/679 | L/2375 | L/1187 | L/792 | L/3562 | L/1781 | L/1187 | L/4750 | L/2375 | L/1583 |
| 13 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/771 | L/385 | L/257 | L/899 | L/450 | L/300 | L/1349 | L/675 | L/450 | L/1799 | L/899 | L/600 | L/1601 | L/801 | L/534 | L/1868 | L/934 | L/623 | L/2802 | L/1401 | L/934 | L/3736 | L/1868 | L/1245 |
| 14 | Vertical (lb) | 10608 | 10608 | 9893 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/617 | L/309 | L/206 | L/720 | L/360 | L/240 | L/1080 | L/540 | L/360 | L/1440 | L/720 | L/480 | L/1282 | L/641 | L/427 | L/1496 | L/748 | L/499 | L/2243 | L/1122 | L/748 | L/2991 | L/1496 | L/997 |
| 15 | Vertical (lb) | 10608 | 10608 | | 12376 | 12376 | 10484 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/502 | L/251 | | L/585 | L/293 | L/195 | L/878 | L/439 | L/293 | L/1171 | L/585 | L/390 | L/1042 | L/521 | L/347 | L/1216 | L/608 | L/405 | L/1824 | L/912 | L/608 | L/2432 | L/1216 | L/811 |
| 16 | Vertical (lb) | 10608 | 9614 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/413 | L/207 | | L/482 | L/241 | | L/724 | L/362 | L/241 | L/965 | L/482 | L/322 | L/859 | L/429 | L/286 | L/1002 | L/501 | L/334 | L/1503 | L/751 | L/501 | L/2004 | L/1002 | L/668 |
| 17 | Vertical (lb) | 10608 | | | 12376 | 10391 | | 18563 | 18563 | 15586 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/345 | | | L/402 | L/201 | | L/603 | L/302 | L/201 | L/804 | L/402 | L/268 | L/716 | L/358 | L/239 | L/835 | L/418 | L/278 | L/1253 | L/626 | L/418 | L/1671 | L/835 | L/557 |
| 18 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 18563 | | 24751 | 24751 | 22433 | 13534 | 13534 | 11469 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/290 | | | L/339 | | | L/508 | L/254 | | L/678 | L/339 | L/226 | L/603 | L/302 | L/201 | L/704 | L/352 | L/235 | L/1056 | L/528 | L/352 | L/1407 | L/704 | L/469 |
| 19 | Vertical (lb) | 9719 | | | 12125 | | | 18563 | 15143 | | 24751 | 24250 | 17844 | 13534 | 13534 | | 15790 | 15790 | 13254 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/247 | | | L/288 | | | L/432 | L/216 | | L/576 | L/288 | L/192 | L/513 | L/256 | | L/598 | L/299 | L/199 | L/897 | L/449 | L/299 | L/1197 | L/598 | L/399 |
| 20 | Vertical (lb) | 7965 | | | 10548 | | | 17120 | 12178 | | 23746 | 21095 | | 13534 | 13003 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/370 | L/185 | | L/494 | L/247 | | L/440 | L/220 | | L/513 | L/256 | | L/769 | L/385 | L/256 | L/1026 | L/513 | L/342 |
| 21 | Vertical (lb) | 6492 | | | 8758 | | | 15079 | | | 20973 | 17517 | | 13534 | 10240 | | 15790 | 14822 | | 23684 | 23684 | 22233 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/183 | | | L/213 | | | L/320 | | | L/427 | L/213 | | L/380 | L/190 | | L/443 | L/222 | | L/665 | L/332 | L/222 | L/886 | L/443 | L/295 |
| 22 | Vertical (lb) | | | | 7246 | | | 13312 | | | 18568 | 14492 | | 13534 | | | 15790 | 11944 | | 23684 | 23684 | 17916 | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | L/186 | | | L/278 | | | L/371 | L/186 | | L/330 | | | L/385 | L/193 | | L/578 | L/289 | L/193 | L/771 | L/385 | L/257 |
| 23 | Vertical (lb) | | | | | | | 11780 | | | 16479 | | | 13534 | | | 15790 | | | 23684 | 23179 | | 31579 | 31579 | 27692 |
| | Defl. Ratio | | | | | | | L/244 | | | L/325 | | | L/289 | | | L/337 | | | L/506 | L/253 | | L/675 | L/337 | L/225 |
| 24 | Vertical (lb) | | | | | | | 10449 | | | 14660 | | | 12599 | | | 15788 | | | 23684 | 19606 | | 31579 | 31575 | 23071 |
| | Defl. Ratio | | | | | | | L/214 | | | L/286 | | | L/254 | | | L/297 | | | L/445 | L/223 | | L/594 | L/297 | L/198 |
| 25 | Vertical (lb) | | | | | | | 9148 | | | 13075 | | | 10764 | | | 14195 | | | 22917 | 16504 | | 31579 | 28390 | |
| | Defl. Ratio | | | | | | | L/190 | | | L/253 | | | L/225 | | | L/263 | | | L/394 | L/197 | | L/525 | L/263 | |
| 26 | Vertical (lb) | | | | | | | | | | 11688 | | | 9165 | | | 12282 | | | 20723 | | | 28800 | 24564 | |
| | Defl. Ratio | | | | | | | | | | L/225 | | | L/200 | | | L/233 | | | L/350 | | | L/467 | L/233 | |
| 27 | Vertical (lb) | | | | | | | | | | 10473 | | | | | | 10585 | | | 18765 | | | 26137 | 21170 | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | | | | L/208 | | | L/313 | | | L/417 | L/208 | |
| 28 | Vertical (lb) | | | | | | | | | | 9406 | | | | | | 9098 | | | 17016 | | | 23755 | 18196 | |
| | Defl. Ratio | | | | | | | | | | L/180 | | | | | | L/187 | | | L/280 | | | L/374 | L/187 | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 15452 | | | 21623 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/252 | | | L/337 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 14053 | | | 19711 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/228 | | | L/304 | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the column height**. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and adjacent studs on at least one side.

**LVL COLUMN DESIGN TABLE** **2250F$_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 4360 | | 5974 | 5974 | 1579 | 9388 | 9388 | 8497 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/558 | L/279 | | L/651 | L/326 | L/217 | L/955 | L/478 | L/318 | L/1444 | L/722 | L/481 | L/1685 | L/842 | L/562 | L/2527 | L/1264 | L/842 |
| 9 | Vertical (lb) | 5121 | 1309 | | 5974 | 3377 | | 9388 | 9282 | 3068 | 8047 | 8047 | 4741 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/392 | L/196 | | L/457 | L/229 | | L/671 | L/335 | L/224 | L/1014 | L/507 | L/338 | L/1183 | L/592 | L/394 | L/1775 | L/888 | L/592 |
| 10 | Vertical (lb) | 4260 | | | 5095 | | | 7863 | 5422 | | 8047 | 8047 | | 9388 | 9388 | 3312 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/333 | | | L/489 | L/245 | | L/739 | L/370 | | L/863 | L/431 | L/288 | L/1294 | L/647 | L/431 |
| 11 | Vertical (lb) | 2980 | | | 3948 | | | 6112 | 2213 | | 8047 | 3984 | | 9388 | 8593 | | 14083 | 14083 | 12889 |
| | Defl. Ratio | L/215 | | | L/251 | | | L/367 | L/184 | | L/556 | L/278 | | L/648 | L/324 | | L/972 | L/486 | L/324 |
| 12 | Vertical (lb) | | | | 2813 | | | 4804 | | | 8047 | | | 9388 | 3699 | | 14083 | 14083 | 5549 |
| | Defl. Ratio | | | | L/193 | | | L/283 | | | L/428 | | | L/499 | L/250 | | L/749 | L/374 | L/250 |
| 13 | Vertical (lb) | | | | | | | 3817 | | | 8047 | | | 9388 | | | 14083 | 12513 | |
| | Defl. Ratio | | | | | | | L/223 | | | L/337 | | | L/393 | | | L/589 | L/294 | |
| 14 | Vertical (lb) | | | | | | | | | | 6199 | | | 9388 | | | 14083 | 7256 | |
| | Defl. Ratio | | | | | | | | | | L/269 | | | L/314 | | | L/472 | L/236 | |
| 15 | Vertical (lb) | | | | | | | | | | 3651 | | | 6732 | | | 13434 | 2904 | |
| | Defl. Ratio | | | | | | | | | | L/219 | | | L/256 | | | L/383 | L/192 | |
| 16 | Vertical (lb) | | | | | | | | | | 1548 | | | 4192 | | | 11366 | | |
| | Defl. Ratio | | | | | | | | | | L/181 | | | L/211 | | | L/316 | | |
| 17 | Vertical (lb) | | | | | | | | | | | | | | | | 9656 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/263 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | | | | 7966 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/222 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 5533 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/189 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the column height. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - No notching is permitted in the middle third of the column height. A notch is permitted at the lower or upper third of the column only. The notch depth must not exceed 7/8" for 3-1/2" thick, and 1-3/8" for 5-1/2" or thicker columns.
   - Only one notch or one hole is premitted at each end of the stud.
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2250$F_b$-1.5E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3308 | L/1654 | L/1103 | L/3859 | L/1930 | L/1286 | L/5789 | L/2894 | L/1930 | L/7719 | L/3859 | L/2573 | L/6870 | L/3435 | L/2290 | L/8015 | L/4008 | L/2672 | L/12023 | L/6011 | L/4008 | L/16031 | L/8015 | L/5344 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2323 | L/1162 | L/774 | L/2711 | L/1355 | L/904 | L/4066 | L/2033 | L/1355 | L/5421 | L/2711 | L/1807 | L/4825 | L/2413 | L/1608 | L/5629 | L/2815 | L/1876 | L/8444 | L/4222 | L/2815 | L/11259 | L/5629 | L/3753 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1694 | L/847 | L/565 | L/1976 | L/988 | L/659 | L/2964 | L/1482 | L/988 | L/3952 | L/1976 | L/1317 | L/3518 | L/1759 | L/1173 | L/4104 | L/2052 | L/1368 | L/6156 | L/3078 | L/2052 | L/8208 | L/4104 | L/2736 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1272 | L/636 | L/424 | L/1485 | L/742 | L/495 | L/2227 | L/1113 | L/742 | L/2969 | L/1485 | L/990 | L/2643 | L/1321 | L/881 | L/3083 | L/1542 | L/1028 | L/4625 | L/2312 | L/1542 | L/6167 | L/3083 | L/2056 |
| 12 | Vertical (lb) | 10608 | 10608 | 10325 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/980 | L/490 | L/327 | L/1143 | L/572 | L/381 | L/1715 | L/858 | L/572 | L/2287 | L/1143 | L/762 | L/2036 | L/1018 | L/679 | L/2375 | L/1187 | L/792 | L/3562 | L/1781 | L/1187 | L/4750 | L/2375 | L/1583 |
| 13 | Vertical (lb) | 10608 | 10608 | 3888 | 12376 | 12376 | 10955 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/771 | L/385 | L/257 | L/899 | L/450 | L/300 | L/1349 | L/675 | L/450 | L/1799 | L/899 | L/600 | L/1601 | L/801 | L/534 | L/1868 | L/934 | L/623 | L/2802 | L/1401 | L/934 | L/3736 | L/1868 | L/1245 |
| 14 | Vertical (lb) | 10608 | 10608 | | 12376 | 12376 | 4433 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/617 | L/309 | | L/720 | L/360 | L/240 | L/1080 | L/540 | L/360 | L/1440 | L/720 | L/480 | L/1282 | L/641 | L/427 | L/1496 | L/748 | L/499 | L/2243 | L/1122 | L/748 | L/2991 | L/1496 | L/997 |
| 15 | Vertical (lb) | 10608 | 7000 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/502 | L/251 | | L/585 | L/293 | | L/878 | L/439 | L/293 | L/1171 | L/585 | L/390 | L/1042 | L/521 | L/347 | L/1216 | L/608 | L/405 | L/1824 | L/912 | L/608 | L/2432 | L/1216 | L/811 |
| 16 | Vertical (lb) | 10608 | 2764 | | 12376 | 8326 | | 18563 | 18563 | 12488 | 24751 | 24751 | 24751 | 13534 | 13534 | 12424 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/413 | L/207 | | L/482 | L/241 | | L/724 | L/362 | L/241 | L/965 | L/482 | L/322 | L/859 | L/429 | L/286 | L/1002 | L/501 | L/334 | L/1503 | L/751 | L/501 | L/2004 | L/1002 | L/668 |
| 17 | Vertical (lb) | 10608 | | | 12376 | 4004 | | 18563 | 18563 | 6006 | 24751 | 24751 | 24584 | 13534 | 13534 | 6132 | 15790 | 15790 | 15334 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/345 | | | L/402 | L/201 | | L/603 | L/302 | L/201 | L/804 | L/402 | L/268 | L/716 | L/358 | L/239 | L/835 | L/418 | L/278 | L/1253 | L/626 | L/418 | L/1671 | L/835 | L/557 |
| 18 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 17097 | | 24751 | 24751 | 16857 | 13534 | 13534 | 463 | 15790 | 15790 | 8778 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/290 | | | L/339 | | | L/508 | L/254 | | L/678 | L/339 | L/226 | L/603 | L/302 | L/201 | L/704 | L/352 | L/235 | L/1056 | L/528 | L/352 | L/1407 | L/704 | L/469 |
| 19 | Vertical (lb) | 9473 | | | 12125 | | | 18563 | 11973 | | 24751 | 24250 | 10154 | 13534 | 12707 | | 15790 | 15790 | 2886 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/247 | | | L/288 | | | L/432 | L/216 | | L/576 | L/288 | L/192 | L/513 | L/256 | | L/598 | L/299 | L/199 | L/897 | L/449 | L/299 | L/1197 | L/598 | L/399 |
| 20 | Vertical (lb) | 6870 | | | 10548 | | | 17120 | 7534 | | 23746 | 21095 | | 13534 | 8167 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/370 | L/185 | | L/494 | L/247 | | L/440 | L/220 | | L/513 | L/256 | | L/769 | L/385 | L/256 | L/1026 | L/513 | L/342 |
| 21 | Vertical (lb) | 4612 | | | 8480 | | | 15079 | | | 20973 | 16959 | | 13534 | 4107 | | 15790 | 11221 | | 23684 | 23684 | 16832 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/183 | | | L/213 | | | L/320 | | | L/427 | L/213 | | L/380 | L/190 | | L/443 | L/222 | | L/665 | L/332 | L/222 | L/886 | L/443 | L/295 |
| 22 | Vertical (lb) | | | | 6112 | | | 13312 | | | 18568 | 12224 | | 13534 | | | 15790 | 6936 | | 23684 | 23684 | 10403 | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | L/186 | | | L/278 | | | L/371 | L/186 | | L/330 | | | L/385 | L/193 | | L/578 | L/289 | L/193 | L/771 | L/385 | L/257 |
| 23 | Vertical (lb) | | | | | | | 11780 | | | 16479 | | | 13534 | | | 15790 | | | 23684 | 23179 | | 31579 | 31579 | 26876 |
| | Defl. Ratio | | | | | | | L/244 | | | L/325 | | | L/289 | | | L/337 | | | L/506 | L/253 | | L/675 | L/337 | L/225 |
| 24 | Vertical (lb) | | | | | | | 10449 | | | 14660 | | | 12599 | | | 15788 | | | 23684 | 19606 | | 31579 | 31575 | 19765 |
| | Defl. Ratio | | | | | | | L/214 | | | L/286 | | | L/254 | | | L/297 | | | L/445 | L/223 | | L/594 | L/297 | L/198 |
| 25 | Vertical (lb) | | | | | | | 9148 | | | 13075 | | | 10764 | | | 14195 | | | 22917 | 15509 | | 31579 | 28390 | |
| | Defl. Ratio | | | | | | | L/190 | | | L/253 | | | L/225 | | | L/263 | | | L/394 | L/197 | | L/525 | L/263 | |
| 26 | Vertical (lb) | | | | | | | | | | 11688 | | | 9165 | | | 12282 | | | 20723 | | | 28800 | 24564 | |
| | Defl. Ratio | | | | | | | | | | L/225 | | | L/200 | | | L/233 | | | L/350 | | | L/467 | L/233 | |
| 27 | Vertical (lb) | | | | | | | | | | 10473 | | | | | | 10585 | | | 18765 | | | 26137 | 21170 | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | | | | L/208 | | | L/313 | | | L/417 | L/208 | |
| 28 | Vertical (lb) | | | | | | | | | | 9406 | | | | | | 9098 | | | 17016 | | | 23755 | 18196 | |
| | Defl. Ratio | | | | | | | | | | L/180 | | | | | | L/187 | | | L/280 | | | L/374 | L/187 | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 15452 | | | 21623 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/252 | | | L/337 | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | | 14053 | | | 19711 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | | L/228 | | | L/304 | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the column height. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - A notch is permitted at the lower or upper third of the column only. The notch depth must not exceed 7/8" for 3-1/2" thick, and 1-3/8" for 5-1/2" or thicker columns.
   - Only one notch or one hole is premitted at each end of the stud.
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 5121 | 5121 | 5974 | 5974 | 5974 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/744 | L/372 | L/248 | L/868 | L/434 | L/289 | L/1365 | L/682 | L/455 | L/1926 | L/963 | L/642 | L/2247 | L/1123 | L/749 | L/3370 | L/1685 | L/1123 |
| 9 | Vertical (lb) | 5121 | 4753 | | 5974 | 5868 | 4294 | 9388 | 9388 | 9070 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/523 | L/261 | | L/610 | L/305 | L/203 | L/958 | L/479 | L/319 | L/1352 | L/676 | L/451 | L/1578 | L/789 | L/526 | L/2367 | L/1183 | L/789 |
| 10 | Vertical (lb) | 4156 | 3058 | | 4937 | 4175 | | 7989 | 7385 | 6012 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/381 | L/191 | | L/445 | L/222 | | L/699 | L/349 | L/233 | L/986 | L/493 | L/329 | L/1150 | L/575 | L/383 | L/1725 | L/863 | L/575 |
| 11 | Vertical (lb) | 3218 | | | 3835 | | | 6238 | 5686 | | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/334 | | | L/525 | L/262 | | L/741 | L/370 | L/247 | L/864 | L/432 | L/288 | L/1296 | L/648 | L/432 |
| 12 | Vertical (lb) | 2516 | | | 3008 | | | 4920 | 4054 | | 8047 | 8047 | 4946 | 9388 | 9388 | 7809 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/221 | | | L/257 | | | L/404 | L/202 | | L/571 | L/285 | L/190 | L/666 | L/333 | L/222 | L/998 | L/499 | L/333 |
| 13 | Vertical (lb) | | | | 2383 | | | 3920 | | | 8047 | 6528 | | 9388 | 9117 | | 14083 | 14083 | 13675 |
| | Defl. Ratio | | | | L/202 | | | L/318 | | | L/449 | L/224 | | L/524 | L/262 | | L/785 | L/393 | L/262 |
| 14 | Vertical (lb) | | | | | | | 3155 | | | 8047 | 4430 | | 9388 | 6572 | | 14083 | 13902 | 9858 |
| | Defl. Ratio | | | | | | | L/255 | | | L/359 | L/180 | | L/419 | L/210 | | L/629 | L/314 | L/210 |
| 15 | Vertical (lb) | | | | | | | | | | 6806 | | | 8146 | | | 12866 | 11236 | |
| | Defl. Ratio | | | | | | | | | | L/292 | | | L/341 | | | L/511 | L/256 | |
| 16 | Vertical (lb) | | | | | | | | | | 5564 | | | 6865 | | | 10909 | 8602 | |
| | Defl. Ratio | | | | | | | | | | L/241 | | | L/281 | | | L/421 | L/211 | |
| 17 | Vertical (lb) | | | | | | | | | | 4318 | | | 5782 | | | 9283 | | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | L/234 | | | L/351 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | 4564 | | | 7931 | | |
| | Defl. Ratio | | | | | | | | | | | | | L/197 | | | L/296 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 6803 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/252 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | 5858 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/216 | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | 5064 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/186 | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the column. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole anywhere [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/4411 | L/2205 | L/1470 | L/5146 | L/2573 | L/1715 | L/7719 | L/3859 | L/2573 | L/10291 | L/5146 | L/3430 | L/9160 | L/4580 | L/3053 | L/10687 | L/5344 | L/3562 | L/16031 | L/8015 | L/5344 | L/21374 | L/10687 | L/7125 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3098 | L/1549 | L/1033 | L/3614 | L/1807 | L/1205 | L/5421 | L/2711 | L/1807 | L/7228 | L/3614 | L/2409 | L/6434 | L/3217 | L/2145 | L/7506 | L/3753 | L/2502 | L/11259 | L/5629 | L/3753 | L/15012 | L/7506 | L/5004 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2258 | L/1129 | L/753 | L/2635 | L/1317 | L/878 | L/3952 | L/1976 | L/1317 | L/5269 | L/2635 | L/1756 | L/4690 | L/2345 | L/1563 | L/5472 | L/2736 | L/1824 | L/8208 | L/4104 | L/2736 | L/10944 | L/5472 | L/3648 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1697 | L/848 | L/566 | L/1979 | L/990 | L/660 | L/2969 | L/1485 | L/990 | L/3959 | L/1979 | L/1320 | L/3524 | L/1762 | L/1175 | L/4111 | L/2056 | L/1370 | L/6167 | L/3083 | L/2056 | L/8222 | L/4111 | L/2741 |
| 12 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1307 | L/653 | L/436 | L/1525 | L/762 | L/508 | L/2287 | L/1143 | L/762 | L/3049 | L/1525 | L/1016 | L/2714 | L/1357 | L/905 | L/3167 | L/1583 | L/1056 | L/4750 | L/2375 | L/1583 | L/6333 | L/3167 | L/2111 |
| 13 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1028 | L/514 | L/343 | L/1199 | L/600 | L/400 | L/1799 | L/899 | L/600 | L/2398 | L/1199 | L/799 | L/2135 | L/1067 | L/712 | L/2491 | L/1245 | L/830 | L/3736 | L/1868 | L/1245 | L/4981 | L/2491 | L/1660 |
| 14 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/823 | L/411 | L/274 | L/960 | L/480 | L/320 | L/1440 | L/720 | L/480 | L/1920 | L/960 | L/640 | L/1709 | L/855 | L/570 | L/1994 | L/997 | L/665 | L/2991 | L/1496 | L/997 | L/3988 | L/1994 | L/1329 |
| 15 | Vertical (lb) | 10608 | 10608 | 9182 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/669 | L/335 | L/223 | L/781 | L/390 | L/260 | L/1171 | L/585 | L/390 | L/1561 | L/781 | L/520 | L/1390 | L/695 | L/463 | L/1621 | L/811 | L/540 | L/2432 | L/1216 | L/811 | L/3243 | L/1621 | L/1081 |
| 16 | Vertical (lb) | 10608 | 10608 | 5993 | 12376 | 12376 | 9936 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/551 | L/276 | L/184 | L/643 | L/322 | L/214 | L/965 | L/482 | L/322 | L/1286 | L/643 | L/429 | L/1145 | L/573 | L/382 | L/1336 | L/668 | L/445 | L/2004 | L/1002 | L/668 | L/2672 | L/1336 | L/891 |
| 17 | Vertical (lb) | 10608 | 9289 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/460 | L/230 | | L/536 | L/268 | | L/804 | L/402 | L/268 | L/1073 | L/536 | L/358 | L/955 | L/477 | L/318 | L/1114 | L/557 | L/371 | L/1671 | L/835 | L/557 | L/2227 | L/1114 | L/742 |
| 18 | Vertical (lb) | 10608 | 6900 | | 12376 | 10154 | | 18563 | 18563 | 15231 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/387 | L/194 | | L/452 | L/226 | | L/678 | L/339 | L/226 | L/904 | L/452 | L/301 | L/804 | L/402 | L/268 | L/938 | L/469 | L/313 | L/1407 | L/704 | L/469 | L/1876 | L/938 | L/625 |
| 19 | Vertical (lb) | 10608 | | | 12376 | 7747 | | 18563 | 18316 | 11620 | 24751 | 24751 | 22045 | 13534 | 13534 | 12136 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/329 | | | L/384 | L/192 | | L/576 | L/288 | L/192 | L/768 | L/384 | L/256 | L/684 | L/342 | L/228 | L/798 | L/399 | L/266 | L/1197 | L/598 | L/399 | L/1596 | L/798 | L/532 |
| 20 | Vertical (lb) | 9547 | | | 11458 | | | 18204 | 14973 | | 24751 | 22915 | 17711 | 13534 | 13534 | 8661 | 15790 | 15790 | 14178 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/282 | | | L/329 | | | L/494 | L/247 | | L/659 | L/329 | L/220 | L/586 | L/293 | L/195 | L/684 | L/342 | L/228 | L/1026 | L/513 | L/342 | L/1368 | L/684 | L/456 |
| 21 | Vertical (lb) | 7911 | | | 10055 | | | 16055 | 12160 | | 22099 | 20110 | 14078 | 13534 | 13534 | | 15790 | 15790 | 10580 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/244 | | | L/284 | | | L/427 | L/213 | | L/569 | L/284 | L/190 | L/506 | L/253 | | L/591 | L/295 | L/197 | L/886 | L/443 | L/295 | L/1182 | L/591 | L/394 |
| 22 | Vertical (lb) | 6507 | | | 8717 | | | 14189 | 9792 | | 19580 | 17435 | | 13534 | 11127 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/371 | L/186 | | L/495 | L/247 | | L/440 | L/220 | | L/514 | L/257 | | L/771 | L/385 | L/257 | L/1028 | L/514 | L/343 |
| 23 | Vertical (lb) | 5320 | | | 7274 | | | 12569 | | | 17388 | 14547 | | 13534 | 8703 | | 15790 | 13019 | | 23684 | 23684 | 19528 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/186 | | | L/217 | | | L/325 | | | L/433 | L/217 | | L/385 | L/193 | | L/450 | L/225 | | L/675 | L/337 | L/225 | L/899 | L/450 | L/300 |
| 24 | Vertical (lb) | | | | 6045 | | | 11159 | | | 15479 | 12090 | | 13534 | | | 15790 | 10473 | | 23684 | 23684 | 15709 | 31579 | 31579 | 29992 |
| | Defl. Ratio | | | | L/191 | | | L/286 | | | L/381 | L/191 | | L/339 | | | L/396 | L/198 | | L/594 | L/297 | L/198 | L/792 | L/396 | L/264 |
| 25 | Vertical (lb) | | | | | | | 9931 | | | 13813 | | | 13534 | | | 15790 | | | 23684 | 21282 | | 31579 | 31579 | 25221 |
| | Defl. Ratio | | | | | | | L/253 | | | L/337 | | | L/300 | | | L/350 | | | L/525 | L/263 | | L/700 | L/350 | L/233 |
| 26 | Vertical (lb) | | | | | | | 8858 | | | 12356 | | | 11691 | | | 14691 | | | 23475 | 18071 | | 31579 | 29382 | 21073 |
| | Defl. Ratio | | | | | | | L/225 | | | L/300 | | | L/267 | | | L/311 | | | L/467 | L/233 | | L/623 | L/311 | L/208 |
| 27 | Vertical (lb) | | | | | | | 7897 | | | 11078 | | | 10033 | | | 13261 | | | 21275 | 15270 | | 29364 | 26521 | 17465 |
| | Defl. Ratio | | | | | | | L/201 | | | L/268 | | | L/238 | | | L/278 | | | L/417 | L/208 | | L/556 | L/278 | L/185 |
| 28 | Vertical (lb) | | | | | | | 6775 | | | 9956 | | | 8581 | | | 11561 | | | 19307 | 12824 | | 26702 | 23122 | |
| | Defl. Ratio | | | | | | | L/180 | | | L/240 | | | L/214 | | | L/249 | | | L/374 | L/187 | | L/499 | L/249 | |
| 29 | Vertical (lb) | | | | | | | | | | 8968 | | | 7308 | | | 10012 | | | 17546 | | | 24317 | 20024 | |
| | Defl. Ratio | | | | | | | | | | L/216 | | | L/192 | | | L/224 | | | L/337 | | | L/449 | L/224 | |
| 30 | Vertical (lb) | | | | | | | | | | 8095 | | | | | | 8648 | | | 15968 | | | 22177 | 17295 | |
| | Defl. Ratio | | | | | | | | | | L/195 | | | | | | L/203 | | | L/304 | | | L/405 | L/203 | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - Drilling may occur anywhere along the column. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 5121 | 5121 | 5974 | 5974 | 5974 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/744 | L/372 | L/248 | L/868 | L/434 | L/289 | L/1365 | L/682 | L/455 | L/1926 | L/963 | L/642 | L/2247 | L/1123 | L/749 | L/3370 | L/1685 | L/1123 |
| 9 | Vertical (lb) | 5121 | 5121 | | 5974 | 5974 | 5974 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/523 | L/261 | | L/610 | L/305 | L/203 | L/958 | L/479 | L/319 | L/1352 | L/676 | L/451 | L/1578 | L/789 | L/526 | L/2367 | L/1183 | L/789 |
| 10 | Vertical (lb) | 5121 | 4729 | | 5974 | 5974 | | 9388 | 9388 | 9171 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/381 | L/191 | | L/445 | L/222 | | L/699 | L/349 | L/233 | L/986 | L/493 | L/329 | L/1150 | L/575 | L/383 | L/1725 | L/863 | L/575 |
| 11 | Vertical (lb) | 4612 | | | 5505 | | | 8987 | 8134 | | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/334 | | | L/525 | L/262 | | L/741 | L/370 | L/247 | L/864 | L/432 | L/288 | L/1296 | L/648 | L/432 |
| 12 | Vertical (lb) | 3618 | | | 4330 | | | 7103 | 6195 | | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/221 | | | L/257 | | | L/404 | L/202 | | L/571 | L/285 | L/190 | L/666 | L/333 | L/222 | L/998 | L/499 | L/333 |
| 13 | Vertical (lb) | | | | 3442 | | | 5674 | | | 8047 | 8047 | | 9388 | 9388 | | 14083 | 14083 | 14083 |
| | Defl. Ratio | | | | L/202 | | | L/318 | | | L/449 | L/224 | | L/524 | L/262 | | L/785 | L/393 | L/262 |
| 14 | Vertical (lb) | | | | | | | 4579 | | | 8047 | 7463 | | 9388 | 9388 | | 14083 | 14083 | 14083 |
| | Defl. Ratio | | | | | | | L/255 | | | L/359 | L/180 | | L/419 | L/210 | | L/629 | L/314 | L/210 |
| 15 | Vertical (lb) | | | | | | | | | | 8047 | | | 9388 | | | 14083 | 14083 | |
| | Defl. Ratio | | | | | | | | | | L/292 | | | L/341 | | | L/511 | L/256 | |
| 16 | Vertical (lb) | | | | | | | | | | 8047 | | | 9388 | | | 14083 | 13254 | |
| | Defl. Ratio | | | | | | | | | | L/241 | | | L/281 | | | L/421 | L/211 | |
| 17 | Vertical (lb) | | | | | | | | | | 6657 | | | 8393 | | | 13477 | | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | L/234 | | | L/351 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | 7009 | | | 11533 | | |
| | Defl. Ratio | | | | | | | | | | | | | L/197 | | | L/296 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 9912 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/252 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | 8555 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/216 | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | 7414 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/186 | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the column height**. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Hole in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/4411 | L/2205 | L/1470 | L/5146 | L/2573 | L/1715 | L/7719 | L/3859 | L/2573 | L/10291 | L/5146 | L/3430 | L/9160 | L/4580 | L/3053 | L/10687 | L/5344 | L/3562 | L/16031 | L/8015 | L/5344 | L/21374 | L/10687 | L/7125 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3098 | L/1549 | L/1033 | L/3614 | L/1807 | L/1205 | L/5421 | L/2711 | L/1807 | L/7228 | L/3614 | L/2409 | L/6434 | L/3217 | L/2145 | L/7506 | L/3753 | L/2502 | L/11259 | L/5629 | L/3753 | L/15012 | L/7506 | L/5004 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2258 | L/1129 | L/753 | L/2635 | L/1317 | L/878 | L/3952 | L/1976 | L/1317 | L/5269 | L/2635 | L/1756 | L/4690 | L/2345 | L/1563 | L/5472 | L/2736 | L/1824 | L/8208 | L/4104 | L/2736 | L/10944 | L/5472 | L/3648 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1697 | L/848 | L/566 | L/1979 | L/990 | L/660 | L/2969 | L/1485 | L/990 | L/3959 | L/1979 | L/1320 | L/3524 | L/1762 | L/1175 | L/4111 | L/2056 | L/1370 | L/6167 | L/3083 | L/2056 | L/8222 | L/4111 | L/2741 |
| 12 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1307 | L/653 | L/436 | L/1525 | L/762 | L/508 | L/2287 | L/1143 | L/762 | L/3049 | L/1525 | L/1016 | L/2714 | L/1357 | L/905 | L/3167 | L/1583 | L/1056 | L/4750 | L/2375 | L/1583 | L/6333 | L/3167 | L/2111 |
| 13 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1028 | L/514 | L/343 | L/1199 | L/600 | L/400 | L/1799 | L/899 | L/600 | L/2398 | L/1199 | L/799 | L/2135 | L/1067 | L/712 | L/2491 | L/1245 | L/830 | L/3736 | L/1868 | L/1245 | L/4981 | L/2491 | L/1660 |
| 14 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/823 | L/411 | L/274 | L/960 | L/480 | L/320 | L/1440 | L/720 | L/480 | L/1920 | L/960 | L/640 | L/1709 | L/855 | L/570 | L/1994 | L/997 | L/665 | L/2991 | L/1496 | L/997 | L/3988 | L/1994 | L/1329 |
| 15 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/669 | L/335 | L/223 | L/781 | L/390 | L/260 | L/1171 | L/585 | L/390 | L/1561 | L/781 | L/520 | L/1390 | L/695 | L/463 | L/1621 | L/811 | L/540 | L/2432 | L/1216 | L/811 | L/3243 | L/1621 | L/1081 |
| 16 | Vertical (lb) | 10608 | 10608 | 10413 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/551 | L/276 | L/184 | L/643 | L/322 | L/214 | L/965 | L/482 | L/322 | L/1286 | L/643 | L/429 | L/1145 | L/573 | L/382 | L/1336 | L/668 | L/445 | L/2004 | L/1002 | L/668 | L/2672 | L/1336 | L/891 |
| 17 | Vertical (lb) | 10608 | 10608 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/460 | L/230 | | L/536 | L/268 | | L/804 | L/402 | L/268 | L/1073 | L/536 | L/358 | L/955 | L/477 | L/318 | L/1114 | L/557 | L/371 | L/1671 | L/835 | L/557 | L/2227 | L/1114 | L/742 |
| 18 | Vertical (lb) | 10608 | 10608 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/387 | L/194 | | L/452 | L/226 | | L/678 | L/339 | L/226 | L/904 | L/452 | L/301 | L/804 | L/402 | L/268 | L/938 | L/469 | L/313 | L/1407 | L/704 | L/469 | L/1876 | L/938 | L/625 |
| 19 | Vertical (lb) | 10608 | | | 12376 | 11704 | | 18563 | 18563 | 17556 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/329 | | | L/384 | L/192 | | L/576 | L/288 | L/192 | L/768 | L/384 | L/256 | L/684 | L/342 | L/228 | L/798 | L/399 | L/266 | L/1197 | L/598 | L/399 | L/1596 | L/798 | L/532 |
| 20 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 18563 | | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/282 | | | L/329 | | | L/494 | L/247 | | L/659 | L/329 | L/220 | L/586 | L/293 | L/195 | L/684 | L/342 | L/228 | L/1026 | L/513 | L/342 | L/1368 | L/684 | L/456 |
| 21 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 17315 | | 24751 | 24751 | 20669 | 13534 | 13534 | | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/244 | | | L/284 | | | L/427 | L/213 | | L/569 | L/284 | L/190 | L/506 | L/253 | | L/591 | L/295 | L/197 | L/886 | L/443 | L/295 | L/1182 | L/591 | L/394 |
| 22 | Vertical (lb) | 9204 | | | 11572 | | | 18563 | 14292 | | 24751 | 23144 | | 13534 | 13534 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/371 | L/186 | | L/495 | L/247 | | L/440 | L/220 | | L/514 | L/257 | | L/771 | L/385 | L/257 | L/1028 | L/514 | L/343 |
| 23 | Vertical (lb) | 7685 | | | 10186 | | | 16483 | | | 22833 | 20371 | | 13534 | 12996 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/186 | | | L/217 | | | L/325 | | | L/433 | L/217 | | L/385 | L/193 | | L/450 | L/225 | | L/675 | L/337 | L/225 | L/899 | L/450 | L/300 |
| 24 | Vertical (lb) | | | | 8613 | | | 14658 | | | 20351 | 17226 | | 13534 | | | 15790 | 15130 | | 23684 | 23684 | 22694 | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | L/191 | | | L/286 | | | L/381 | L/191 | | L/339 | | | L/396 | L/198 | | L/594 | L/297 | L/198 | L/792 | L/396 | L/264 |
| 25 | Vertical (lb) | | | | | | | 13067 | | | 18184 | | | 13534 | | | 15790 | | | 23684 | 23684 | | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | | | | L/253 | | | L/337 | | | L/300 | | | L/350 | | | L/525 | L/263 | | L/700 | L/350 | L/233 |
| 26 | Vertical (lb) | | | | | | | 11677 | | | 16288 | | | 13534 | | | 15790 | | | 23684 | 23684 | | 31579 | 31579 | 29157 |
| | Defl. Ratio | | | | | | | L/225 | | | L/300 | | | L/267 | | | L/311 | | | L/467 | L/233 | | L/623 | L/311 | L/208 |
| 27 | Vertical (lb) | | | | | | | 10460 | | | 14625 | | | 13355 | | | 15790 | | | 23684 | 20907 | | 31579 | 31579 | 24775 |
| | Defl. Ratio | | | | | | | L/201 | | | L/268 | | | L/238 | | | L/278 | | | L/417 | L/208 | | L/556 | L/278 | L/185 |
| 28 | Vertical (lb) | | | | | | | 9390 | | | 13163 | | | 11595 | | | 14785 | | | 23684 | 17935 | | 31579 | 29570 | |
| | Defl. Ratio | | | | | | | L/180 | | | L/240 | | | L/214 | | | L/249 | | | L/374 | L/187 | | L/499 | L/249 | |
| 29 | Vertical (lb) | | | | | | | | | | 11875 | | | 10048 | | | 13327 | | | 21629 | | | 29971 | 26653 | |
| | Defl. Ratio | | | | | | | | | | L/216 | | | L/192 | | | L/224 | | | L/337 | | | L/449 | L/224 | |
| 30 | Vertical (lb) | | | | | | | | | | 10736 | | | | | | 11670 | | | 19710 | | | 27361 | 23339 | |
| | Defl. Ratio | | | | | | | | | | L/195 | | | | | | L/203 | | | L/304 | | | L/405 | L/203 | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - **No drilling in the middle third of the column height**. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - **No notching is permitted.**
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950F$_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 3-1/2" Wall Thickness | | | | | | | | | 5-1/2" Wall Thickness | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 3-1/2" [5] | | | 3-1/2" x 3-1/2" [5] | | | 5-1/2" x 3-1/2" Plank [5] | | | Dbl 1-1/2" x 5-1/2" [5] | | | 3-1/2" x 5-1/2" [5] | | | 5-1/4" x 5-1/2" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 40 | 80 | 120 | 40 | 80 | 120 | 40 | 80 | 120 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 5121 | 5121 | 3763 | 5974 | 5974 | 5974 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/744 | L/372 | L/248 | L/868 | L/434 | L/289 | L/1365 | L/682 | L/455 | L/1926 | L/963 | L/642 | L/2247 | L/1123 | L/749 | L/3370 | L/1685 | L/1123 |
| 9 | Vertical (lb) | 5121 | 5121 | | 5974 | 5974 | 2369 | 9388 | 9388 | 9388 | 8047 | 8047 | 8047 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/523 | L/261 | | L/610 | L/305 | L/203 | L/958 | L/479 | L/319 | L/1352 | L/676 | L/451 | L/1578 | L/789 | L/526 | L/2367 | L/1183 | L/789 |
| 10 | Vertical (lb) | 5121 | 2187 | | 5974 | 4570 | | 9388 | 9388 | 5354 | 8047 | 8047 | 7819 | 9388 | 9388 | 9388 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/381 | L/191 | | L/445 | L/222 | | L/699 | L/349 | L/233 | L/986 | L/493 | L/329 | L/1150 | L/575 | L/383 | L/1725 | L/863 | L/575 |
| 11 | Vertical (lb) | 4612 | | | 5505 | | | 8987 | 8042 | | 8047 | 8047 | 1009 | 9388 | 9388 | 6946 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/286 | | | L/334 | | | L/525 | L/262 | | L/741 | L/370 | L/247 | L/864 | L/432 | L/288 | L/1296 | L/648 | L/432 |
| 12 | Vertical (lb) | 3618 | | | 4330 | | | 7103 | 4404 | | 8047 | 7433 | | 9388 | 9388 | 353 | 14083 | 14083 | 14083 |
| | Defl. Ratio | L/221 | | | L/257 | | | L/404 | L/202 | | L/571 | L/285 | | L/666 | L/333 | L/222 | L/998 | L/499 | L/333 |
| 13 | Vertical (lb) | | | | 3442 | | | 5674 | | | 8047 | 2700 | | 9388 | 7615 | | 14083 | 14083 | 11422 |
| | Defl. Ratio | | | | L/202 | | | L/318 | | | L/449 | L/224 | | L/524 | L/262 | | L/785 | L/393 | L/262 |
| 14 | Vertical (lb) | | | | | | | 4579 | | | 8047 | | | 9388 | 2980 | | 14083 | 14083 | 4471 |
| | Defl. Ratio | | | | | | | L/255 | | | L/359 | | | L/419 | L/210 | | L/629 | L/314 | L/210 |
| 15 | Vertical (lb) | | | | | | | | | | 8047 | | | 9388 | | | 14083 | 13006 | |
| | Defl. Ratio | | | | | | | | | | L/292 | | | L/341 | | | L/511 | L/256 | |
| 16 | Vertical (lb) | | | | | | | | | | 6728 | | | 9388 | | | 14083 | 7907 | |
| | Defl. Ratio | | | | | | | | | | L/241 | | | L/281 | | | L/421 | L/211 | |
| 17 | Vertical (lb) | | | | | | | | | | 4238 | | | 7579 | | | 13477 | | |
| | Defl. Ratio | | | | | | | | | | L/201 | | | L/234 | | | L/351 | | |
| 18 | Vertical (lb) | | | | | | | | | | | | | 5068 | | | 11533 | | |
| | Defl. Ratio | | | | | | | | | | | | | L/197 | | | L/296 | | |
| 19 | Vertical (lb) | | | | | | | | | | | | | | | | 9912 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/252 | | |
| 20 | Vertical (lb) | | | | | | | | | | | | | | | | 8555 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/216 | | |
| 21 | Vertical (lb) | | | | | | | | | | | | | | | | 7176 | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | L/186 | | |
| 22 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 23 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 24 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 25 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 26 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 27 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 28 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 29 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |
| 30 | Vertical (lb) | | | | | | | | | | | | | | | | | | |
| | Defl. Ratio | | | | | | | | | | | | | | | | | | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the column height. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - No notching is permitted in the middle third of the column height. A notch is permitted at the lower or upper third of the column only. The notch depth must not exceed 7/8" for 3-1/2" thick, and 1-3/8" for 5-1/2" or thicker columns.
   - Only one notch or one hole is premitted at each end of the stud.
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side.

**LVL COLUMN DESIGN TABLE** **2950$F_b$-2.0E**

**Maximum specified lateral wind[1] and vertical load[2]** **Notch in end third of column only [4]** **LP LVL**

| Wall Height (ft) | Load and Deflection | 7-1/4" Wall Thickness | | | | | | | | | | | | 9-1/4" Wall Thickness | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dbl 1-1/2" x 7-1/4" [5] | | | 3-1/2" x 7-1/4" [5] | | | 5-1/4" x 7-1/4" [5] | | | 7" x 7-1/4" [5] | | | Dbl 1-1/2" x 9-1/4" [5] | | | 3-1/2" x 9-1/4" [5] | | | 5-1/4" x 9-1/4" [5] | | | 7" x 9-1/4" [5] | | |
| | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | | Specified lateral load (plf) | | |
| | | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 | 60 | 120 | 180 |
| 8 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/4411 | L/2205 | L/1470 | L/5146 | L/2573 | L/1715 | L/7719 | L/3859 | L/2573 | L/10291 | L/5146 | L/3430 | L/9160 | L/4580 | L/3053 | L/10687 | L/5344 | L/3562 | L/16031 | L/8015 | L/5344 | L/21374 | L/10687 | L/7125 |
| 9 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/3098 | L/1549 | L/1033 | L/3614 | L/1807 | L/1205 | L/5421 | L/2711 | L/1807 | L/7228 | L/3614 | L/2409 | L/6434 | L/3217 | L/2145 | L/7506 | L/3753 | L/2502 | L/11259 | L/5629 | L/3753 | L/15012 | L/7506 | L/5004 |
| 10 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/2258 | L/1129 | L/753 | L/2635 | L/1317 | L/878 | L/3952 | L/1976 | L/1317 | L/5269 | L/2635 | L/1756 | L/4690 | L/2345 | L/1563 | L/5472 | L/2736 | L/1824 | L/8208 | L/4104 | L/2736 | L/10944 | L/5472 | L/3648 |
| 11 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1697 | L/848 | L/566 | L/1979 | L/990 | L/660 | L/2969 | L/1485 | L/990 | L/3959 | L/1979 | L/1320 | L/3524 | L/1762 | L/1175 | L/4111 | L/2056 | L/1370 | L/6167 | L/3083 | L/2056 | L/8222 | L/4111 | L/2741 |
| 12 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1307 | L/653 | L/436 | L/1525 | L/762 | L/508 | L/2287 | L/1143 | L/762 | L/3049 | L/1525 | L/1016 | L/2714 | L/1357 | L/905 | L/3167 | L/1583 | L/1056 | L/4750 | L/2375 | L/1583 | L/6333 | L/3167 | L/2111 |
| 13 | Vertical (lb) | 10608 | 10608 | 10608 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/1028 | L/514 | L/343 | L/1199 | L/600 | L/400 | L/1799 | L/899 | L/600 | L/2398 | L/1199 | L/799 | L/2135 | L/1067 | L/712 | L/2491 | L/1245 | L/830 | L/3736 | L/1868 | L/1245 | L/4981 | L/2491 | L/1660 |
| 14 | Vertical (lb) | 10608 | 10608 | 10374 | 12376 | 12376 | 12376 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/823 | L/411 | L/274 | L/960 | L/480 | L/320 | L/1440 | L/720 | L/480 | L/1920 | L/960 | L/640 | L/1709 | L/855 | L/570 | L/1994 | L/997 | L/665 | L/2991 | L/1496 | L/997 | L/3988 | L/1994 | L/1329 |
| 15 | Vertical (lb) | 10608 | 10608 | 3807 | 12376 | 12376 | 11918 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/669 | L/335 | L/223 | L/781 | L/390 | L/260 | L/1171 | L/585 | L/390 | L/1561 | L/781 | L/520 | L/1390 | L/695 | L/463 | L/1621 | L/811 | L/540 | L/2432 | L/1216 | L/811 | L/3243 | L/1621 | L/1081 |
| 16 | Vertical (lb) | 10608 | 10608 | | 12376 | 12376 | 5249 | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/551 | L/276 | | L/643 | L/322 | L/214 | L/965 | L/482 | L/322 | L/1286 | L/643 | L/429 | L/1145 | L/573 | L/382 | L/1336 | L/668 | L/445 | L/2004 | L/1002 | L/668 | L/2672 | L/1336 | L/891 |
| 17 | Vertical (lb) | 10608 | 8687 | | 12376 | 12376 | | 18563 | 18563 | 18563 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/460 | L/230 | | L/536 | L/268 | | L/804 | L/402 | L/268 | L/1073 | L/536 | L/358 | L/955 | L/477 | L/318 | L/1114 | L/557 | L/371 | L/1671 | L/835 | L/557 | L/2227 | L/1114 | L/742 |
| 18 | Vertical (lb) | 10608 | 4323 | | 12376 | 10741 | | 18563 | 18563 | 16111 | 24751 | 24751 | 24751 | 13534 | 13534 | 13534 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/387 | L/194 | | L/452 | L/226 | | L/678 | L/339 | L/226 | L/904 | L/452 | L/301 | L/804 | L/402 | L/268 | L/938 | L/469 | L/313 | L/1407 | L/704 | L/469 | L/1876 | L/938 | L/625 |
| 19 | Vertical (lb) | 10608 | | | 12376 | 6244 | | 18563 | 18563 | 9366 | 24751 | 24751 | 24751 | 13534 | 13534 | 9991 | 15790 | 15790 | 15790 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/329 | | | L/384 | L/192 | | L/576 | L/288 | L/192 | L/768 | L/384 | L/256 | L/684 | L/342 | L/228 | L/798 | L/399 | L/266 | L/1197 | L/598 | L/399 | L/1596 | L/798 | L/532 |
| 20 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 18563 | | 24751 | 24751 | 22653 | 13534 | 13534 | 3902 | 15790 | 15790 | 13983 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/282 | | | L/329 | | | L/494 | L/247 | | L/659 | L/329 | L/220 | L/586 | L/293 | L/195 | L/684 | L/342 | L/228 | L/1026 | L/513 | L/342 | L/1368 | L/684 | L/456 |
| 21 | Vertical (lb) | 10608 | | | 12376 | | | 18563 | 16416 | | 24751 | 24751 | 15538 | 13534 | 13534 | | 15790 | 15790 | 7591 | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/244 | | | L/284 | | | L/427 | L/213 | | L/569 | L/284 | L/190 | L/506 | L/253 | | L/591 | L/295 | L/197 | L/886 | L/443 | L/295 | L/1182 | L/591 | L/394 |
| 22 | Vertical (lb) | 9204 | | | 11572 | | | 18563 | 11664 | | 24751 | 23144 | | 13534 | 13131 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/212 | | | L/247 | | | L/371 | L/186 | | L/495 | L/247 | | L/440 | L/220 | | L/514 | L/257 | | L/771 | L/385 | L/257 | L/1028 | L/514 | L/343 |
| 23 | Vertical (lb) | 7015 | | | 10186 | | | 16483 | | | 22833 | 20371 | | 13534 | 8655 | | 15790 | 15790 | | 23684 | 23684 | 23684 | 31579 | 31579 | 31579 |
| | Defl. Ratio | L/186 | | | L/217 | | | L/325 | | | L/433 | L/217 | | L/385 | L/193 | | L/450 | L/225 | | L/675 | L/337 | L/225 | L/899 | L/450 | L/300 |
| 24 | Vertical (lb) | | | | 8613 | | | 14658 | | | 20351 | 17226 | | 13534 | | | 15790 | 12542 | | 23684 | 23684 | 18813 | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | L/191 | | | L/286 | | | L/381 | L/191 | | L/339 | | | L/396 | L/198 | | L/594 | L/297 | L/198 | L/792 | L/396 | L/264 |
| 25 | Vertical (lb) | | | | | | | 13067 | | | 18184 | | | 13534 | | | 15790 | | | 23684 | 23684 | | 31579 | 31579 | 31579 |
| | Defl. Ratio | | | | | | | L/253 | | | L/337 | | | L/300 | | | L/350 | | | L/525 | L/263 | | L/700 | L/350 | L/233 |
| 26 | Vertical (lb) | | | | | | | 11677 | | | 16288 | | | 13534 | | | 15790 | | | 23684 | 23684 | | 31579 | 31579 | 29157 |
| | Defl. Ratio | | | | | | | L/225 | | | L/300 | | | L/267 | | | L/311 | | | L/467 | L/233 | | L/623 | L/311 | L/208 |
| 27 | Vertical (lb) | | | | | | | 10460 | | | 14625 | | | 13355 | | | 15790 | | | 23684 | 20907 | | 31579 | 31579 | 24272 |
| | Defl. Ratio | | | | | | | L/201 | | | L/268 | | | L/238 | | | L/278 | | | L/417 | L/208 | | L/556 | L/278 | L/185 |
| 28 | Vertical (lb) | | | | | | | 9390 | | | 13163 | | | 11595 | | | 14785 | | | 23684 | 17935 | | 31579 | 29570 | |
| | Defl. Ratio | | | | | | | L/180 | | | L/240 | | | L/214 | | | L/249 | | | L/374 | L/187 | | L/499 | L/249 | |
| 29 | Vertical (lb) | | | | | | | | | | 11875 | | | 10048 | | | 13327 | | | 21629 | | | 29971 | 26653 | |
| | Defl. Ratio | | | | | | | | | | L/216 | | | L/192 | | | L/224 | | | L/337 | | | L/449 | L/224 | |
| 30 | Vertical (lb) | | | | | | | | | | 10736 | | | | | | 11670 | | | 19710 | | | 27361 | 23339 | |
| | Defl. Ratio | | | | | | | | | | L/195 | | | | | | L/203 | | | L/304 | | | L/405 | L/203 | |

Notes:

1. To calculate the specified (unfactored) lateral wind load, multiply the design wind pressure from Table 1 by the column tributary (ft). This table is only valid when used with the pressures given in Table 1.
2. Vertical load refers to the total specified (unfactored) load. The tabulated values are valid when the vertical live load is between 1 and 4 times the vertical dead load. For other conditions contact LP.
3. This table has been prepared in accordance with the 2005 National Building Code of Canada and CSA Standard O86-05 for residential buildings within the scope of Part 9.
4. This table is based on the following:
   - An effective length factor of 1.0
   - Stud bearing on SPF plates with a specified compressive strength perpendicular to grain of 769 psi. Design of wall plates for moment, shear and deflection shall be by others.
   - The vertical load is applied at the centreline of the stud.
   - No drilling in the middle third of the column height. A hole is permitted at the lower or upper third of the column only. The hole diameter must not exceed 1-1/8" for 3-1/2" thickness, and 1-13/16" for 5-1/2" thick or larger columns. A mimimum clear edge distance of 5/8" is required between the edge of the hole and the edge of the column.
   - A notch is permitted at the lower or upper third of the column only. The notch depth must not exceed 7/8" for 3-1/2" thick, and 1-3/8" for 5-1/2" or thicker columns.
   - Only one notch or one hole is premitted at each end of the stud.
5. The first dimension is parallel to the wall, the second dimension is perpendicular to the wall.
6. Columns require wood-based panel sheathing on at least one side and solid blocking at 8' on centre between the column and an adjacent stud on at least one side..