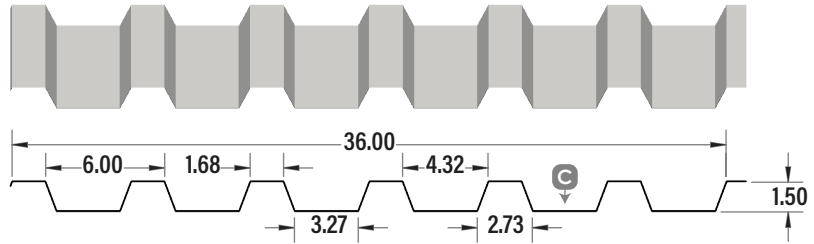
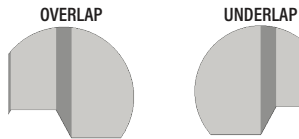




WF-636R WALL



All dimensions are in inches

SECTION PROPERTIES (PER FOOT OF WIDTH)

| IMPERIAL | Base Steel Thickness (in.) | Weight G90 (psf) | Yield Stress (ksi) | Sec. Modulus | | Deflection Moment of Inertia (in ⁴) | Specified Web Crippling Data | | | |
|----------|----------------------------|------------------|--------------------|--------------------|--------------------|---|------------------------------|--------------------------|-------------------------------|-------------------------------|
| | | | | Midspan | Support | | P _{e1} End (lb) | P _{e2} End (lb) | P _{i1} Interior (lb) | P _{i2} Interior (lb) |
| | | | | (in ³) | (in ³) | | | | | |
| | 0.018 | 1.06 | 33 | 0.0958 | 0.0917 | 0.103 | 62.7 | 15.7 | 112 | 19.1 |
| | 0.024 | 1.39 | 33 | 0.141 | 0.138 | 0.143 | 118 | 29.5 | 213 | 36.2 |
| | 0.030 | 1.72 | 33 | 0.189 | 0.185 | 0.180 | 191 | 47.8 | 348 | 59.1 |
| | 0.036 | 2.06 | 33 | 0.238 | 0.226 | 0.216 | 283 | 70.6 | 517 | 87.8 |
| | 0.048 | 2.72 | 33 | 0.314 | 0.307 | 0.286 | 521 | 130 | 958 | 163 |

Live load factor = 1.4; Importance factor = 0.75; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (PSF)

| SPAN LENGTH (ft) | | 1-SPAN | | | 2-SPAN | | | 3-SPAN | | |
|------------------|---|----------------------------|-------|-------|----------------------------|-------|-------|----------------------------|-------|-------|
| | | BASE STEEL THICKNESS (in.) | | | BASE STEEL THICKNESS (in.) | | | BASE STEEL THICKNESS (in.) | | |
| | | 0.018 | 0.024 | 0.030 | 0.018 | 0.024 | 0.030 | 0.018 | 0.024 | 0.030 |
| 4.0 | S | 85 | 124 | 167 | 85 | 124 | 167 | 101 | 153 | 205 |
| | D | 188 | 261 | 327 | 188 | 261 | 327 | 355 | 492 | 619 |
| 4.5 | S | 67 | 98 | 132 | 67 | 98 | 132 | 80 | 121 | 162 |
| | D | 132 | 183 | 230 | 132 | 183 | 230 | 249 | 346 | 434 |
| 5.0 | S | 54 | 80 | 107 | 54 | 80 | 107 | 65 | 98 | 131 |
| | D | 96 | 133 | 168 | 96 | 133 | 168 | 182 | 252 | 317 |
| 5.5 | S | 45 | 66 | 88 | 45 | 66 | 88 | 54 | 81 | 108 |
| | D | 72 | 100 | 126 | 72 | 100 | 126 | 137 | 189 | 238 |
| 6.0 | S | 38 | 55 | 74 | 38 | 55 | 74 | 45 | 68 | 91 |
| | D | 56 | 77 | 97 | 56 | 77 | 97 | 105 | 146 | 183 |
| 6.5 | S | 32 | 47 | 63 | 32 | 47 | 63 | 38 | 58 | 77 |
| | D | 44 | 61 | 76 | 44 | 61 | 76 | 83 | 115 | 144 |
| 7.0 | S | 28 | 41 | 54 | 28 | 41 | 54 | 33 | 50 | 67 |
| | D | 35 | 49 | 61 | 35 | 49 | 61 | 66 | 92 | 115 |
| 7.5 | S | 24 | 35 | 47 | 24 | 35 | 47 | 29 | 43 | 58 |
| | D | 28 | 40 | 50 | 28 | 40 | 50 | 54 | 75 | 94 |
| 8.0 | S | 21 | 31 | 42 | 21 | 31 | 42 | 25 | 38 | 51 |
| | D | 23 | 33 | 41 | 23 | 33 | 41 | 44 | 62 | 77 |
| 8.5 | S | 19 | 28 | 37 | 19 | 28 | 37 | 22 | 34 | 45 |
| | D | 20 | 27 | 34 | 20 | 27 | 34 | 37 | 51 | 64 |
| 9.0 | S | 17 | 25 | 33 | 17 | 25 | 33 | 20 | 30 | 40 |
| | D | 16 | 23 | 29 | 16 | 23 | 29 | 31 | 43 | 54 |
| 9.5 | S | 15 | 22 | 30 | 15 | 22 | 30 | 18 | 27 | 36 |
| | D | 14 | 19 | 24 | 14 | 19 | 24 | 26 | 37 | 46 |
| 10.0 | S | 14 | 20 | 27 | 14 | 20 | 27 | 16 | 24 | 33 |
| | D | 12 | 17 | 21 | 12 | 17 | 21 | 23 | 32 | 40 |
| 10.5 | S | 12 | 18 | 24 | 12 | 18 | 24 | 15 | 22 | 30 |
| | D | 10 | 14 | 18 | 10 | 14 | 18 | 20 | 27 | 34 |
| 11.0 | S | 11 | 16 | 22 | 11 | 16 | 22 | 13 | 20 | 27 |
| | D | 9 | 13 | 16 | 9 | 13 | 16 | 17 | 24 | 30 |

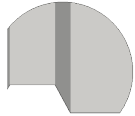
- Notes:**
- 1 Based on ASTM A 653 structural steel. Coating can also be AZ50.
 - 2 Values in row "S" are based on strength.
 - 3 Values in row "D" are based on deflection of L/180.
 - 4 For L/240, multiply values in row "D" by 0.75.
 - 5 Web crippling not included in strength calculations. See Example.
 - 6 Limit States Design principles were used in accordance with CSA S136-16.
 - 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.





WF-636R WALL

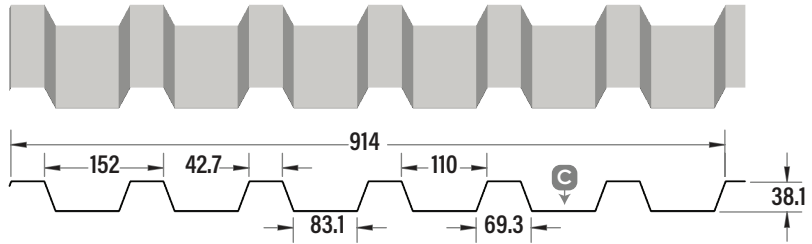
OVERLAP



UNDERLAP



All dimensions are in millimeters



SECTION PROPERTIES (PER METRE OF WIDTH)

| METRIC | Base Steel Thickness (mm) | Mass Z275 (kg/m ²) | Yield Stress (MPa) | Sec. Modulus | | Deflection Moment of Inertia (x10 ⁶ mm ⁴) | Specified Web Crippling Data | | | |
|--------|---------------------------|--------------------------------|--------------------|-------------------------------------|-------------------------------------|--|------------------------------|--------------------------|-------------------------------|-------------------------------|
| | | | | Midspan | Support | | P _{e1} End (kN) | P _{e2} End (kN) | P _{i1} Interior (kN) | P _{i2} Interior (kN) |
| | | | | (x10 ³ mm ³) | (x10 ³ mm ³) | | | | | |
| | 0.457 | 5.16 | 230 | 5.14 | 4.92 | 0.141 | 0.925 | 0.231 | 1.65 | 0.281 |
| | 0.610 | 6.79 | 230 | 7.55 | 7.41 | 0.196 | 1.74 | 0.434 | 3.14 | 0.534 |
| | 0.762 | 8.42 | 230 | 10.1 | 9.95 | 0.246 | 2.82 | 0.704 | 5.13 | 0.872 |
| | 0.914 | 10.1 | 230 | 12.8 | 12.1 | 0.295 | 4.17 | 1.04 | 7.62 | 1.30 |
| | 1.22 | 13.3 | 230 | 16.9 | 16.5 | 0.391 | 7.69 | 1.92 | 14.1 | 2.40 |

Live load factor = 1.4; Importance factor = 0.75; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOADS (kPa)

| SPAN LENGTH (mm) | | 1-SPAN | | | 2-SPAN | | | 3-SPAN | | |
|------------------|---|---------------------------|-------|-------|---------------------------|-------|-------|---------------------------|-------|-------|
| | | BASE STEEL THICKNESS (mm) | | | BASE STEEL THICKNESS (mm) | | | BASE STEEL THICKNESS (mm) | | |
| | | 0.457 | 0.610 | 0.762 | 0.457 | 0.610 | 0.762 | 0.457 | 0.610 | 0.762 |
| 1200 | S | 4.22 | 6.20 | 8.32 | 4.04 | 6.09 | 8.17 | 5.05 | 7.61 | 10.2 |
| | D | 9.42 | 13.1 | 16.4 | 22.6 | 31.4 | 39.5 | 17.8 | 24.7 | 31.1 |
| 1400 | S | 3.10 | 4.55 | 6.11 | 2.97 | 4.47 | 6.00 | 3.71 | 5.59 | 7.50 |
| | D | 5.93 | 8.24 | 10.4 | 14.2 | 19.8 | 24.8 | 11.2 | 15.6 | 19.6 |
| 1600 | S | 2.38 | 3.49 | 4.68 | 2.27 | 3.42 | 4.60 | 2.84 | 4.28 | 5.74 |
| | D | 3.97 | 5.52 | 6.93 | 9.54 | 13.2 | 16.6 | 7.51 | 10.4 | 13.1 |
| 1800 | S | 1.88 | 2.75 | 3.70 | 1.80 | 2.71 | 3.63 | 2.24 | 3.38 | 4.54 |
| | D | 2.79 | 3.88 | 4.87 | 6.70 | 9.30 | 11.7 | 5.28 | 7.32 | 9.20 |
| 2000 | S | 1.52 | 2.23 | 2.99 | 1.45 | 2.19 | 2.94 | 1.82 | 2.74 | 3.68 |
| | D | 2.03 | 2.82 | 3.55 | 4.88 | 6.78 | 8.52 | 3.85 | 5.34 | 6.71 |
| 2200 | S | 1.26 | 1.84 | 2.47 | 1.20 | 1.81 | 2.43 | 1.50 | 2.26 | 3.04 |
| | D | 1.53 | 2.12 | 2.67 | 3.67 | 5.09 | 6.40 | 2.89 | 4.01 | 5.04 |
| 2400 | S | 1.06 | 1.55 | 2.08 | 1.01 | 1.52 | 2.04 | 1.26 | 1.90 | 2.55 |
| | D | 1.18 | 1.63 | 2.05 | 2.83 | 3.92 | 4.93 | 2.23 | 3.09 | 3.88 |
| 2600 | S | 0.90 | 1.32 | 1.77 | 0.86 | 1.30 | 1.74 | 1.08 | 1.62 | 2.18 |
| | D | 0.93 | 1.29 | 1.62 | 2.22 | 3.09 | 3.88 | 1.75 | 2.43 | 3.05 |
| 2800 | S | 0.78 | 1.14 | 1.53 | 0.74 | 1.12 | 1.50 | 0.93 | 1.40 | 1.88 |
| | D | 0.74 | 1.03 | 1.29 | 1.78 | 2.47 | 3.11 | 1.40 | 1.95 | 2.45 |
| 3000 | S | 0.68 | 0.99 | 1.33 | 0.65 | 0.97 | 1.31 | 0.81 | 1.22 | 1.63 |
| | D | 0.60 | 0.84 | 1.05 | 1.45 | 2.01 | 2.52 | 1.14 | 1.58 | 1.99 |
| 3200 | S | 0.59 | 0.87 | 1.17 | 0.57 | 0.86 | 1.15 | 0.71 | 1.07 | 1.44 |
| | D | 0.50 | 0.69 | 0.87 | 1.19 | 1.66 | 2.08 | 0.94 | 1.30 | 1.64 |
| 3400 | S | 0.53 | 0.77 | 1.04 | 0.50 | 0.76 | 1.02 | 0.63 | 0.95 | 1.27 |
| | D | 0.41 | 0.58 | 0.72 | 0.99 | 1.38 | 1.73 | 0.78 | 1.09 | 1.37 |
| 3600 | S | 0.47 | 0.69 | 0.92 | 0.45 | 0.68 | 0.91 | 0.56 | 0.85 | 1.13 |
| | D | 0.35 | 0.48 | 0.61 | 0.84 | 1.16 | 1.5 | 0.66 | 0.92 | 1.15 |
| 3800 | S | 0.42 | 0.62 | 0.83 | 0.40 | 0.61 | 0.81 | 0.50 | 0.76 | 1.02 |
| | D | 0.30 | 0.41 | 0.52 | 0.71 | 0.99 | 1.24 | 0.56 | 0.78 | 0.98 |
| 4000 | S | 0.38 | 0.56 | 0.75 | 0.36 | 0.55 | 0.74 | 0.45 | 0.68 | 0.92 |
| | D | 0.25 | 0.35 | 0.44 | 0.61 | 0.85 | 1.07 | 0.48 | 0.67 | 0.84 |

Notes:

- 1 Based on ASTM A 653M structural steel. Coating can also be AZM150.
- 2 Values in row "S" are based on strength.
- 3 Values in row "D" are based on deflection of L/180.
- 4 For L/240, multiply values in row "D" by 0.75.
- 5 Web crippling not included in strength calculations. See Example.
- 6 Limit States Design principles were used in accordance with CSA S136-16.
- 7 Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.



Canadian Sheet Steel Building Institute
A Division of the Canadian Institute of Steel Construction