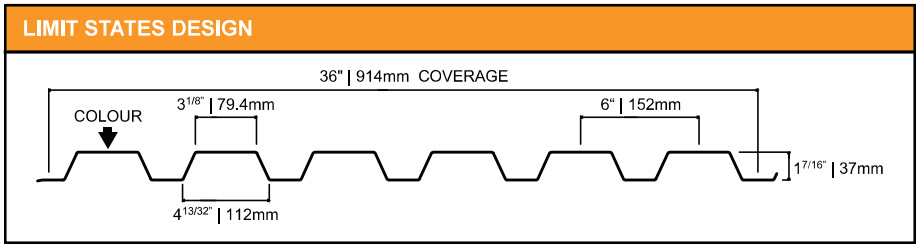


1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-12.



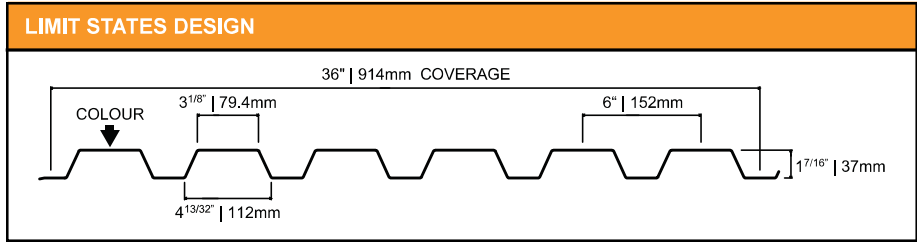
| SECTION PROPERTIES   Per Foot of Width |                    |                    |                            |                            |   |                              |              |                   |                   |
|--|--------------------|--------------------|----------------------------|----------------------------|---|------------------------------|--------------|-------------------|-------------------|
| Base Steel Thickness (inches)          | Weight [G90] (psf) | Yield Stress (ksi) | Section Modulus            |                            | Deflection Moment of Inertia (in <sup>4</sup> ) | Specified Web Crippling Data |              |                   |                   |
|  |                    |                    | Midspan (in <sup>3</sup> ) | Support (in <sup>3</sup> ) |   | Pe1 End (lb)                 | Pe2 End (lb) | Pi1 Interior (lb) | Pi1 Interior (lb) |
| 0.0180                                 | 1.04               | 33                 | 0.0847                     | 0.0884                     | 0.0754  | 58.0                         | 14.5         | 111               | 18.8              |
| 0.0180                                 | 1.04               | 50                 | 0.0778                     | 0.0822                     | 0.0707  | 87.8                         | 22.0         | 168               | 28.5              |
| 0.0240                                 | 1.36               | 33                 | 0.128                      | 0.130                      | 0.114   | 109                          | 27.2         | 207               | 35.2              |
| 0.0300                                 | 1.69               | 33                 | 0.175                      | 0.176                      | 0.152   | 176                          | 44.0         | 335               | 56.9              |

LLF = 1.50; IMPF = 0.90; NORMAL OCCUPANCY = 1.0

| LOAD TABLE   Maximum Uniformly Distributed Specified Loads (psf). |   |                                      |        |        |        |                                      |        |        |        |                                      |        |        |        |  |
|---|---|--------------------------------------|--------|--------|--------|--------------------------------------|--------|--------|--------|--------------------------------------|--------|--------|--------|--|
| Span Length (ft)  |   | 1-Span Base Steel Thickness (inches) |        |        |        | 2-Span Base Steel Thickness (inches) |        |        |        | 3-Span Base Steel Thickness (inches) |        |        |        |  |
|   |   | 0.0180                               | 0.0180 | 0.0240 | 0.0300 | 0.0180                               | 0.0180 | 0.0240 | 0.0300 | 0.0135                               | 0.0180 | 0.0240 | 0.0300 |  |
| Y.S.* (ksi)   |   | 33                                   | 50     | 33     | 33     |                                      |        |        |        |                                      |        |        |        |  |
| 4.0   | S | 70                                   | 97     | 106    | 144    |                                      |        |        |        |                                      |        |        |        |  |
| 4.0   | D | 114                                  | 107    | 173    | 230    |                                      |        |        |        |                                      |        |        |        |  |
| 4.5   | S | 55                                   | 77     | 84     | 114    |                                      |        |        |        |                                      |        |        |        |  |
| 4.5   | D | 80                                   | 75     | 121    | 161    |                                      |        |        |        |                                      |        |        |        |  |
| 5.0   | S | 45                                   | 62     | 68     | 92     |                                      |        |        |        |                                      |        |        |        |  |
| 5.0   | D | 58                                   | 55     | 88     | 118    |                                      |        |        |        |                                      |        |        |        |  |
| 5.5   | S | 37                                   | 51     | 56     | 76     |                                      |        |        |        |                                      |        |        |        |  |
| 5.5   | D | 44                                   | 41     | 66     | 88     |                                      |        |        |        |                                      |        |        |        |  |
| 6.0   | S | 31                                   | 43     | 47     | 64     |                                      |        |        |        |                                      |        |        |        |  |
| 6.0   | D | 34                                   | 32     | 51     | 68     |                                      |        |        |        |                                      |        |        |        |  |
| 6.5   | S | 26                                   | 37     | 40     | 55     |                                      |        |        |        |                                      |        |        |        |  |
| 6.5   | D | 27                                   | 25     | 40     | 54     |                                      |        |        |        |                                      |        |        |        |  |
| 7.0   | S | 23                                   | 32     | 35     | 47     |                                      |        |        |        |                                      |        |        |        |  |
| 7.0   | D | 21                                   | 20     | 32     | 43     |                                      |        |        |        |                                      |        |        |        |  |
| 7.5   | S | 20                                   | 28     | 30     | 41     |                                      |        |        |        |                                      |        |        |        |  |
| 7.5   | D | 17                                   | 16     | 26     | 35     |                                      |        |        |        |                                      |        |        |        |  |
| 8.0   | S | 17                                   | 24     | 26     | 36     |                                      |        |        |        |                                      |        |        |        |  |
| 8.0   | D | 14                                   | 13     | 22     | 29     |                                      |        |        |        |                                      |        |        |        |  |
| 8.5   | S | 15                                   | 22     | 23     | 32     |                                      |        |        |        |                                      |        |        |        |  |
| 8.5   | D | 12                                   | 11     | 18     | 24     |                                      |        |        |        |                                      |        |        |        |  |
| 9.0   | S | 14                                   | 19     | 21     | 28     |                                      |        |        |        |                                      |        |        |        |  |
| 9.0   | D | 10                                   | 9      | 15     | 20     |                                      |        |        |        |                                      |        |        |        |  |
| 9.5   | S | 12                                   | 17     | 19     | 26     |                                      |        |        |        |                                      |        |        |        |  |
| 9.5   | D | 9                                    | 8      | 13     | 17     |                                      |        |        |        |                                      |        |        |        |  |
| 10.0  | S | 11                                   | 16     | 17     | 23     |                                      |        |        |        |                                      |        |        |        |  |
| 10.0  | D | 7                                    | 7      | 11     | 15     |                                      |        |        |        |                                      |        |        |        |  |

\*Y.S. = Yield Strength

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-12.



**SECTION PROPERTIES | Per Metre of Width**

| Base Steel Thickness (mm) | Mass [Z275] (kg/m <sup>2</sup> ) | Yield Stress (MPa) | Section Modulus                             |   | Deflection Moment of Inertia (x10 <sup>6</sup> mm <sup>4</sup> ) | Specified Web Crippling Data |              |                   |                   |
|---------------------------|----------------------------------|--------------------|---|---|--|------------------------------|--------------|-------------------|-------------------|
|                           |                                  |                    | Midspan (x10 <sup>3</sup> mm <sup>3</sup> ) | Support (x10 <sup>3</sup> mm <sup>3</sup> ) |  | Pe1 End (kN)                 | Pe2 End (kN) | Pi1 Interior (kN) | Pi1 Interior (kN) |
| 0.457                     | 5.06                             | 230                | 4.54  | 4.74  | 0.103  | 0.855                        | 0.214        | 1.63              | 0.277             |
| 0.457                     | 5.06                             | 345                | 4.18  | 4.42  | 0.0965   | 1.28                         | 0.321        | 2.45              | 0.416             |
| 0.610                     | 6.66                             | 230                | 6.87  | 7.00  | 0.155  | 1.60                         | 0.401        | 3.06              | 0.519             |
| 0.762                     | 8.26                             | 230                | 9.37  | 9.43  | 0.207  | 2.60                         | 0.649        | 4.94              | 0.840             |

LLF = 1.50; IMPF = 0.90; NORMAL OCCUPANCY = 1.0

**LOAD TABLE | Maximum Uniformly Distributed Specified Loads (kPa).**

| Span Length (m) |   | 1-Span Base Steel Thickness (mm) |       |       |       | 2-Span Base Steel Thickness (mm) |       |       |       | 3-Span Base Steel Thickness (mm) |       |       |       |
|-----------------|---|----------------------------------|-------|-------|-------|----------------------------------|-------|-------|-------|----------------------------------|-------|-------|-------|
|                 |   | 0.457                            | 0.457 | 0.610 | 0.762 | 0.457                            | 0.457 | 0.610 | 0.762 | 0.457                            | 0.457 | 0.610 | 0.762 |
| Y.S.* (MPa)     |   | 230                              | 345   | 230   | 230   | 230                              | 345   | 230   | 230   | 230                              | 345   | 230   | 230   |
| 1.0             | S | 5.01                             | 6.92  | 7.59  | 10.4  | 5.24                             | 7.32  | 7.72  | 10.4  | 6.55                             | 9.15  | 9.66  | 13.0  |
| 1.0             | D | 9.89                             | 9.29  | 15.0  | 19.9  | 23.7                             | 22.3  | 35.9  | 47.8  | 18.7                             | 17.6  | 28.3  | 37.6  |
| 1.2             | S | 3.48                             | 4.81  | 5.27  | 7.19  | 3.64                             | 5.08  | 5.36  | 7.23  | 4.55                             | 6.35  | 6.71  | 9.04  |
| 1.2             | D | 5.72                             | 5.38  | 8.65  | 11.5  | 13.7                             | 12.9  | 20.8  | 27.7  | 10.8                             | 10.2  | 16.4  | 21.8  |
| 1.4             | S | 2.56                             | 3.53  | 3.87  | 5.28  | 2.67                             | 3.73  | 3.94  | 5.31  | 3.34                             | 4.67  | 4.93  | 6.64  |
| 1.4             | D | 3.60                             | 3.39  | 5.45  | 7.26  | 8.65                             | 8.12  | 13.1  | 17.4  | 6.81                             | 6.40  | 10.3  | 13.7  |
| 1.6             | S | 1.96                             | 2.70  | 2.96  | 4.04  | 2.05                             | 2.86  | 3.02  | 4.07  | 2.56                             | 3.57  | 3.77  | 5.08  |
| 1.6             | D | 2.41                             | 2.27  | 3.65  | 4.86  | 5.79                             | 5.44  | 8.76  | 11.7  | 4.56                             | 4.29  | 6.90  | 9.19  |
| 1.8             | S | 1.55                             | 2.14  | 2.34  | 3.19  | 1.62                             | 2.26  | 2.38  | 3.21  | 2.02                             | 2.82  | 2.98  | 4.02  |
| 1.8             | D | 1.70                             | 1.59  | 2.56  | 3.41  | 4.07                             | 3.82  | 6.15  | 8.19  | 3.20                             | 3.01  | 4.84  | 6.45  |
| 2.0             | S | 1.25                             | 1.73  | 1.90  | 2.59  | 1.31                             | 1.83  | 1.93  | 2.60  | 1.64                             | 2.29  | 2.41  | 3.25  |
| 2.0             | D | 1.24                             | 1.16  | 1.87  | 2.49  | 2.97                             | 2.79  | 4.48  | 5.97  | 2.34                             | 2.19  | 3.53  | 4.70  |
| 2.2             | S | 1.04                             | 1.43  | 1.57  | 2.14  | 1.08                             | 1.51  | 1.60  | 2.15  | 1.35                             | 1.89  | 1.99  | 2.69  |
| 2.2             | D | 0.93                             | 0.87  | 1.40  | 1.87  | 2.23                             | 2.09  | 3.37  | 4.49  | 1.76                             | 1.65  | 2.65  | 3.53  |
| 2.4             | S | 0.87                             | 1.20  | 1.32  | 1.80  | 0.91                             | 1.27  | 1.34  | 1.81  | 1.14                             | 1.59  | 1.68  | 2.26  |
| 2.4             | D | 0.72                             | 0.67  | 1.08  | 1.44  | 1.72                             | 1.61  | 2.60  | 3.46  | 1.35                             | 1.27  | 2.04  | 2.72  |
| 2.6             | S | 0.74                             | 1.02  | 1.12  | 1.53  | 0.77                             | 1.08  | 1.14  | 1.54  | 0.97                             | 1.35  | 1.43  | 1.93  |
| 2.6             | D | 0.56                             | 0.53  | 0.85  | 1.13  | 1.35                             | 1.27  | 2.04  | 2.72  | 1.06                             | 1.00  | 1.61  | 2.14  |
| 2.8             | S | 0.64                             | 0.88  | 0.97  | 1.32  | 0.67                             | 0.93  | 0.99  | 1.33  | 0.83                             | 1.17  | 1.23  | 1.66  |
| 2.8             | D | 0.45                             | 0.42  | 0.68  | 0.91  | 1.08                             | 1.02  | 1.63  | 2.18  | 0.85                             | 0.80  | 1.29  | 1.71  |
| 3.0             | S | 0.56                             | 0.77  | 0.84  | 1.15  | 0.58                             | 0.81  | 0.86  | 1.16  | 0.73                             | 1.02  | 1.07  | 1.45  |
| 3.0             | D | 0.37                             | 0.34  | 0.55  | 0.74  | 0.88                             | 0.83  | 1.33  | 1.77  | 0.69                             | 0.65  | 1.05  | 1.39  |

\*Y.S. = Yield Strength