

**VERTICAL TRUSS LOAD COMBINATIONS**

Percent  
Overstress  
1.00  
Group I DL  
Group II Case 1 DL + Wn + 2Wt Wn = WIND FORCES IN THE X DIRECTION  
Group II Case 2 DL + SWn + 3Wt 1.33  
Group III Case 1 DL + ICE + 5Wn + 1Wt 1.33 Minimum wind pressure of 25 psf  
Group III Case 2 DL + ICE + 5Wn + 15Wt 1.33 Minimum wind pressure of 25 psf

**LOADS ON VERTICAL POSTS**

| Location      | LOADS | Vxx (kip/ft) |      |       |         | AXIAL (kip/ft) |       |      |         | Vyy  |      |      |         | AXIAL |      |      |         |      |
|---------------|-------|--------------|------|-------|---------|----------------|-------|------|---------|------|------|------|---------|-------|------|------|---------|------|
|               |       | DL           | ICE  | WIND  | WIND II | DL             | ICE   | WIND | WIND II | DL   | ICE  | WIND | WIND II | DL    | ICE  | WIND | WIND II |      |
| Left Support  |       | 0.00         | 0.00 | 0.012 | 0.029   | 0.072          | 0.011 | 0.00 | 0.00    | 0.00 | 6.64 | 6.64 | 2.01    | 1.23  | 0.00 | 0.00 | 0.00    | 0.00 |
| Right Support |       | 0.00         | 0.00 | 0.012 | 0.029   | 0.072          | 0.011 | 0.00 | 0.00    | 0.00 | 6.41 | 6.41 | 1.80    | 1.06  | 0.00 | 0.00 | 0.00    | 0.00 |

Wt = 12.06 12.06

| Depth of Horizontal Truss | Total Left Post Ht. | Total Right Post Ht. | Relative Stiffness Transverse Wind |
|---------------------------|---------------------|----------------------|------------------------------------|
| 3.00                      | 25.63               | 26.52                | WT                                 |

**LOAD COMBINATION RESULTS (Loads and Moments are for both posts)**

| Reactions     | Mstrong | Mweak | Vstrong | Wind T1 | Axial | WT   |
|---------------|---------|-------|---------|---------|-------|------|
| Left Support  | 0.00    | 0.00  | 0.00    | 0       | 3.85  | 0    |
| Right Support | 0.00    | 0.00  | 0.00    | 0       | 3.72  | 0    |
| Left Support  | 122.83  | 23.66 | 5.22    | 1.91    | 2.90  | 6.39 |
| Right Support | 104.85  | 21.91 | 4.30    | 0.90    | 2.70  | 5.66 |
| Left Support  | 73.70   | 35.49 | 3.13    | 1.51    | 2.90  | 6.39 |
| Right Support | 62.01   | 32.87 | 2.58    | 1.35    | 2.70  | 5.66 |
| Left Support  | 63.56   | 11.83 | 2.79    | 0.50    | 4.03  | 6.39 |
| Right Support | 54.74   | 10.96 | 2.33    | 0.46    | 3.81  | 5.66 |
| Left Support  | 38.14   | 17.74 | 1.67    | 0.50    | 4.03  | 6.39 |
| Right Support | 32.84   | 16.44 | 1.39    | 0.46    | 3.81  | 5.66 |

**Posts**

**Left Post**

| Chord Area     | Max. Off | Eleg. Area | Ixx  | Sxx   | Izz            | Chord | Szz            | Weight | Ice Area         | Wind Area      | Diagonal |
|----------------|----------|------------|------|-------|----------------|-------|----------------|--------|------------------|----------------|----------|
| A <sub>s</sub> | is       | Ad         | Ibot | Sbot  | I <sub>z</sub> | Rmin  | S <sub>z</sub> | W      | A <sub>ice</sub> | A <sub>w</sub> | R min    |
| 21.21          | 483.093  | 0.00       | 483  | 69.01 | 483.09         | 4.77  | 69.0           | 72.16  | 3.67             | 1.167          | 99       |
| WT             | WT       | WT         | WT   | WT    | WT             | WT    | WT             | WT     | WT               | WT             | WT       |

**Right Post**

| Chord Area     | Max. Off | Eleg. Area | Ixx  | Sxx   | Izz            | Chord | Szz            | Weight | Ice Area         | Wind Area      | Diagonal |
|----------------|----------|------------|------|-------|----------------|-------|----------------|--------|------------------|----------------|----------|
| A <sub>s</sub> | is       | Ad         | Ibot | Sbot  | I <sub>z</sub> | Rmin  | S <sub>z</sub> | W      | A <sub>ice</sub> | A <sub>w</sub> | R min    |
| 21.21          | 483.093  | 0.00       | 483  | 69.01 | 483.09         | 4.77  | 69.0           | 72.16  | 3.67             | 1.167          | 99       |
| WT             | WT       | WT         | WT   | WT    | WT             | WT    | WT             | WT     | WT               | WT             | WT       |

**LOAD COMBINATION RESULTS (Per Post for design)**

| Reactions     | Max. Axial | Min. Axial | Mstrong | Mweak  | Max. V | V    |
|---------------|------------|------------|---------|--------|--------|------|
| Left Support  | 3.85       | 0.00       | 0.00    | 0.00   | 0.00   | 0.00 |
| Right Support | 3.72       | 0.00       | 0.00    | 0.00   | 0.00   | 0.00 |
| Left Support  | 2.90       | 122.83     | 23.66   | 122.83 | 5.31   | 5.31 |
| Right Support | 2.79       | 104.85     | 21.91   | 104.85 | 4.99   | 4.99 |
| Left Support  | 2.90       | 73.70      | 35.49   | 73.70  | 3.47   | 3.47 |
| Right Support | 2.79       | 62.01      | 32.87   | 62.01  | 2.91   | 2.91 |
| Left Support  | 4.03       | 63.56      | 11.83   | 63.56  | 2.92   | 2.92 |
| Right Support | 3.81       | 54.74      | 10.96   | 54.74  | 2.37   | 2.37 |
| Left Support  | 4.03       | 38.14      | 17.74   | 38.14  | 1.74   | 1.74 |
| Right Support | 3.81       | 32.84      | 16.44   | 32.84  | 1.46   | 1.46 |

Number of Posts: 1