

Horizontal Truss Analysis FALSE

Section 1 - Chords

Unbraced Length (in.)	Pipe Diameter (in.)	Wall Thickness (in.)	Pipe Area (in. ²)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
72.0	4.000	0.226	2.68	42.0	35.39	116.7	53.95	13.21	20.52	0.64

Section 2 - Chords

Unbraced Length (in.)	Pipe Diameter (in.)	Wall Thickness (in.)	Pipe Area (in. ²)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
72.0	4.000	0.226	2.68	42.0	35.47	116.7	53.95	13.24	20.52	0.64

Diagonals - Horizontal

Unbraced Length (in.)	Pipe or Angle	Diagonal Area (in. ²)	R min (in.)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
34.6	ANGLE	0.94	0.39	36.0	7.31	126.1	88.97	7.80	14.32	0.54

Diagonals - Vertical

Unbraced Length (in.)	Pipe or Angle	Diagonal Area (in. ²)	R min (in.)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
34.6	ANGLE	0.94	0.39	36.0	3.75	126.1	88.97	4.00	14.32	0.28

Deflections at Mid-Span

Span = 696.84 inches l = 1751 in ⁴	Uniform Load		Point Loads		Mid-Span	
	Load p/f	Load k/inch	Load Kips	Dist. A inches	Dist. B inches	Deflection inches
Dead Load of Truss	40	0.0032918	0.72	193.92	502.92	0.23
Dead Load of Sign 1			0.61	415.39	281.45	0.0812
Dead Load of Sign 2			0.00	0.00	0.00	0.0000
Dead Load of Sign 3			0.00	0.00	0.00	0.0000
Ice on Truss	18	0.0014924	0.59	193.92	502.92	0.09
Ice on Sign 1			0.50	415.39	281.45	0.0669
Ice on Sign 2			0.00	0.00	0.00	0.0000
Ice on Sign 3			0.00	0.00	0.00	0.0000

Total Defl. (DL+Ice)	0.57	inches
Allowable Deflection	4.65	inches

Dead Load Deflection	0.35	inches
Extra Camber (L/1000)	0.69684	inches
Total Camber	1.05	inches