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	43.69	116.7	53.95	16.31	20.52	0.79

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	36.12	116.7	53.95	13.48	20.52	0.66

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
35.2	ANGLE	0.94	0.39	36.0	7.90	126.1	90.43	8.42	14.15	0.60

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
35.2	ANGLE	0.94	0.39	36.0	4.04	126.1	90.43	4.31	14.15	0.30

Deflections at Mid-Span

Span = 767.64 inches
I = 1751 in^4

	Uniform Load		Point Loads			Mid-Span
	Load plf	Load k/inch	Load kips	Dist. A inches	Dist. B inches	Deflection inches
Dead Load of Truss	40	0.0033059				0.29
Dead Load of Sign 1			0.66	367.92	399.72	0.1231
Dead Load of Sign 2			0.71	572.76	194.88	0.0928
Dead Load of Sign 3			0.00	0.00	0.00	0.0000
Ice on Truss	18	0.0014924				0.13
Ice on Sign 1			0.55	367.92	399.72	0.1012
Ice on Sign 2			0.58	572.76	194.88	0.0763
Ice on Sign 3			0.00	0.00	0.00	0.0000

Total Defl. (DL+Ice)	0.82	inches
Allowable Deflection	5.12	inches

Dead Load Deflection	0.51	inches
Extra Camber (L/1000)	0.76764	inches
Total Camber	1.28	inches

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