STRESS TABLE

Front Lower Chord

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L1	L2	-5.2	37.7	0.9	56.3	-26.4	36.9
L2	L3	22.9	34.6	47.6	51.3	-13.9	34.1
L3	L4	46.6	37.8	85.9	56.0	-0.9	37.4
L4	L5	65.7	38.7	115.7	57.1	12.7	38.7
L5	L6	80.4	39.5	137.2	58.4	26.9	39.1
L6	L7	90.0	40.7	149.4	58.9	41.0	43.3
L7	L8	90.3	40.6	149.4	58.9	42.1	43.3
L8	L9	85.1	39.6	137.9	58.5	47.0	39.4
L9	L10	74.7	39.0	117.0	57.2	51.8	39.7
L10	L11	60.1	38.2	87.8	56.1	57.3	39.1
L11	L12	40.8	35.1	50.1	51.4	63.4	36.2
L12	L13	17.1	38.5	4.0	56.4	69.9	40.2

Rear Lower Chord

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L14	L15	0.4	40.3	0.5	59.6	0.6	40.8
L15	L16	39.8	36.9	49.2	54.3	60.6	37.7
L16	L17	71.7	40.2	89.2	59.2	108.1	40.8
L17	L18	96.0	41.0	120.2	60.4	143.0	41.2
L18	L19	112.8	42.1	142.3	61.8	165.5	42.7
L19	L20	122.0	41.7	155.3	62.5	175.1	39.3
L20	L21	117.6	41.6	154.7	62.5	156.1	39.0
L21	L22	104.0	41.8	141.1	61.7	127.4	41.8
L22	L23	82.8	40.6	118.3	60.4	86.0	39.7
L23	L24	54.0	39.7	86.7	59.2	31.9	38.6
L24	L25	17.7	36.3	46.1	54.2	-34.6	36.9
L25	L26	-26.1	39.4	-3.2	59.5	-113.8	36.9

Front Upper Chord

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
U1	U2	-37.7	14.8	-47.0	20.9	-56.7	15.7
U2	U3	-68.2	7.0	-85.0	10.1	-102.5	6.5
U3	U4	-91.9	7.2	-114.5	10.2	-138.0	6.8
U4	U5	-108.7	8.9	-135.5	12.5	-163.1	8.9
U5	U6	-118.9	9.4	-148.3	13.5	-178.2	9.1
U6	U7	-121.5	10.5	-151.6	13.8	-182.2	13.7
U7	U8	-121.5	10.5	-151.6	13.8	-182.2	13.7
U8	U9	-118.8	9.5	-148.3	13.5	-178.2	9.4
U9	U10	-108.7	9.1	-135.5	12.6	-163.0	9.9
U10	U11	-91.8	7.5	-114.5	10.2	-137.8	8.4
U11	U12	-68.2	7.6	-85.0	10.2	-102.3	8.8
U12	U13	-37.7	13.8	-47.0	20.8	-56.5	11.7

Rear Upper Chord

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
U14	U15	-34.1	15.3	-49.5	22.1	-33.6	15.4
U15	U16	-56.8	7.7	-89.8	10.5	-37.5	8.4
U16	U17	-74.3	7.7	-121.1	10.6	-39.7	8.2
U17	U18	-86.6	9.3	-143.5	13.0	-40.2	9.5
U18	U19	-93.7	10.1	-157.1	14.0	-38.8	10.7
U19	U20	-95.5	9.6	-161.5	14.6	-35.8	7.5
U20	U21	-95.7	9.6	-161.5	14.6	-37.0	6.9
U21	U22	-94.0	9.9	-157.1	14.0	-40.0	9.8
U22	U23	-86.9	8.9	-143.5	13.0	-41.4	7.9
U23	U24	-74.6	7.2	-121.1	10.5	-41.0	6.0
U24	U25	-57.1	7.0	-89.8	10.5	-38.8	5.6
U25	U26	-34.4	16.4	-49.6	22.2	-34.9	20.2

Front Truss Vertical

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L2	U2	-20.4	0.4	-29.2	0.5	-20.6	0.5
L3	U3	-16.1	0.4	-23.1	0.5	-16.4	0.5
L4	U4	-11.6	0.3	-16.6	0.4	-11.9	0.4
L5	U5	-7.2	0.2	-10.2	0.3	-7.5	0.3
L6	U6	-2.7	0.1	-3.8	0.1	-3.0	0.3
L7	U7	-0.4	0.0	-0.5	0.0	-0.2	0.0
L8	U8	-2.6	0.1	-3.7	0.1	-2.2	0.3
L9	U9	-7.0	0.2	-10.2	0.2	-6.7	0.3
L10	U10	-11.4	0.3	-16.6	0.4	-11.1	0.3
L11	U11	-15.9	0.4	-23.0	0.5	-15.6	0.4
L12	U12	-20.2	0.4	-29.2	0.5	-19.8	0.4

Rear Truss Vertical

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L15	U15	-21.3	0.4	-30.8	0.6	-21.1	0.4
L16	U16	-16.9	0.4	-24.4	0.6	-16.6	0.3
L17	U17	-12.2	0.2	-17.6	0.4	-11.9	0.1
L18	U18	-7.5	0.2	-10.8	0.3	-7.2	0.0
L19	U19	-2.8	0.1	-4.1	0.1	-2.6	0.1
L20	U20	-0.6	0.0	-0.7	0.0	-0.7	0.0
L21	U21	-3.0	0.1	-4.1	0.1	-3.4	0.1
L22	U22	-7.7	0.2	-10.9	0.3	-8.0	0.1
L23	U23	-12.3	0.3	-17.6	0.4	-12.7	0.2
L24	U24	-17.1	0.4	-24.4	0.6	-17.4	0.4
L25	U25	-21.5	0.4	-30.9	0.6	-21.9	0.5

Lower Chord Struts

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L1	L14	0.0	35.5	0.0	47.6	0.0	84.3
L2	L15	-2.8	54.3	0.2	81.2	-13.6	54.3
L3	L16	-2.1	54.3	0.2	81.3	-10.0	54.3
L4	L17	-1.3	54.3	0.1	81.3	-6.4	54.3
L5	L18	-0.5	54.3	0.2	81.3	-2.7	54.4
L6	L19	0.2	54.3	0.0	81.3	0.8	54.4
L7	L20	-0.8	54.3	-0.5	81.3	-2.5	54.4
L8	L21	-2.2	54.3	-0.3	81.3	-9.4	54.4
L9	L22	-2.8	54.3	-0.1	81.3	-12.9	54.4
L10	L23	-3.7	54.3	-0.2	81.3	-16.6	54.4
L11	L24	-4.4	54.3	-0.2	81.3	-20.2	54.4
L12	L25	-5.2	54.3	-0.2	81.2	-23.9	54.3
L13	L26	0.0	36.1	0.0	47.6	0.0	86.7

Upper Chord Struts

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
U2	U15	-2.7	0.0	0.0	0.0	-12.5	0.0
U3	U16	-2.1	0.0	0.0	0.0	-9.9	0.0
U4	U17	-1.5	0.0	0.0	0.0	-7.3	0.1
U5	U18	-1.0	0.0	0.0	0.0	-4.8	0.1
U6	U19	-0.3	0.1	0.2	0.1	-2.1	0.2
U7	U20	0.1	0.1	0.5	0.1	-0.7	0.2
U8	U21	-0.5	0.1	0.2	0.1	-2.7	0.2
U9	U22	-1.2	0.1	0.0	0.0	-5.4	0.2
U10	U23	-1.7	0.1	0.0	0.0	-7.9	0.2
U11	U24	-2.3	0.0	0.0	0.0	-10.5	0.1
U12	U25	-2.8	0.0	0.0	0.0	-13.1	0.1

Lower Bracing Diagonals

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L1	L15	6.4	0.0	-0.4	0.0	30.7	0.0
L2	L16	4.8	0.0	-0.3	0.0	23.3	0.0
L3	L17	3.2	0.0	-0.3	0.0	16.0	0.1
L4	L18	1.7	0.0	-0.2	0.1	8.6	0.1
L5	L19	-0.1	0.0	-0.5	0.1	1.1	0.1
L6	L20	-0.9	0.0	0.6	0.1	-5.8	0.1
L8	L20	3.9	0.0	1.3	0.1	15.2	0.1
L9	L21	4.8	0.0	0.2	0.1	21.8	0.1
L10	L22	6.5	0.0	0.4	0.0	29.4	0.1
L11	L23	8.1	0.0	0.4	0.0	36.7	0.1
L12	L24	9.7	0.0	0.4	0.0	44.0	0.1
L13	L25	11.2	0.0	0.3	0.0	51.7	0.1

Upper Bracing Diagonals

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
U1	U15	5.8	0.0	0.0	0.1	27.2	0.0
U2	U16	4.7	0.0	-0.1	0.0	22.1	0.0
U3	U17	3.6	0.0	0.0	0.0	17.0	0.0
U4	U18	2.5	0.0	-0.1	0.0	11.8	0.0
U5	U19	1.6	0.0	0.2	0.0	6.9	0.1
U6	U20	-0.3	0.0	-0.9	0.0	1.0	0.1
U8	U20	0.0	0.0	-0.9	0.0	2.3	0.1
U9	U21	1.9	0.0	0.2	0.0	8.2	0.1
U10	U22	2.8	0.0	-0.1	0.0	13.1	0.1
U11	U23	3.9	0.0	0.0	0.0	18.2	0.1
U12	U24	5.0	0.0	0.0	0.0	23.3	0.1
U13	U25	6.1	0.0	0.0	0.1	28.5	0.0

Front Truss Diagonals

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L2	U1	40.5	0.0	58.4	0.1	40.9	0.1
L3	U2	33.2	0.0	47.7	0.1	33.6	0.1
L4	U3	25.8	0.0	37.1	0.1	26.3	0.1
L5	U4	18.5	0.0	26.5	0.1	18.9	0.2
L6	U5	11.1	0.1	15.9	0.1	11.6	0.2
L7	U6	3.7	0.1	5.2	0.1	4.0	0.3
L7	U8	3.4	0.1	5.2	0.1	2.7	0.3
L8	U9	10.8	0.1	15.8	0.1	10.3	0.3
L9	U10	18.1	0.0	26.4	0.1	17.5	0.3
L10	U11	25.5	0.0	37.1	0.1	24.9	0.2
L11	U12	32.9	0.0	47.7	0.1	32.2	0.2
L12	U13	40.2	0.0	58.3	0.1	39.6	0.1

Rear Truss Diagonals

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L15	U14	42.5	0.1	61.6	0.0	42.0	0.1
L16	U15	34.8	0.1	50.4	0.0	34.4	0.2
L17	U16	27.1	0.1	39.3	0.0	26.6	0.2
L18	U17	19.3	0.1	28.1	0.1	18.9	0.2
L19	U18	11.6	0.1	16.9	0.1	11.1	0.3
L20	U19	3.9	0.1	5.8	0.1	3.6	0.4
L20	U21	4.2	0.2	5.8	0.1	5.0	0.4
L21	U22	11.9	0.1	17.0	0.1	12.4	0.4
L22	U23	19.7	0.1	28.2	0.1	20.3	0.4
L23	U24	27.4	0.1	39.3	0.0	28.0	0.3
L24	U25	35.1	0.1	50.5	0.0	35.8	0.3
L25	U26	42.8	0.1	61.6	0.0	43.4	0.2

Portal at Expansion Bearing

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L1	P1	-21.2	27.9	-36.1	34.6	-7.2	67.6
P1	U1	-24.6	22.3	-35.3	20.3	-25.0	54.6
U1	P2	-3.3	13.8	-0.2	20.6	-15.2	12.2
P2	U14	0.1	14.9	-0.2	20.8	0.9	16.6
P3	U14	-25.6	4.5	-37.1	19.7	-25.2	27.9
L14	P3	-30.1	35.8	-37.9	33.6	-44.1	84.9
P1	P2	3.7	0.7	-0.9	1.0	19.5	0.6
P3	P2	-4.9	0.9	-0.9	1.3	-20.6	1.0

Portal at Fixed Bearing

Members		Service I Axial	Bending	Strength I Axial	Bending	Strength III Axial	Bending
L13	P4	-20.8	28.3	-36.0	34.5	-5.6	69.6
P4	U13	-24.4	22.6	-35.2	20.3	-24.1	56.2
U13	P5	-3.5	13.8	-0.2	20.6	-15.9	12.1
P5	U26	0.1	14.9	-0.2	20.8	0.9	16.8
P6	U26	-25.8	4.6	-37.2	19.6	-26.1	29.5
L26	P6	-30.5	36.4	-38.0	33.7	-45.7	87.5
P4	P5	3.9	0.7	-0.9	1.0	20.3	4.4
P6	P5	-5.1	0.8	-0.9	1.2	-21.5	4.5

LOAD COMBINATIONS

Strength I = 1.25 DC + 1.50 DP
Strenth III = 1.00 DC + 1.00 DP + 1.40 WS
Service I = 1.0 DC + 1.00 DP + 0.30 WS

DC = Dead Load of Structural Components
DP = Dead Load of Pipe and Contents
WS = Wind Load on Structure

Notes:
In the stress table axial compression is indicated by a negative sign, axial force is in kips, and bending moment is in kip-in.

REACTIONS

LOCATION	SERVICE I KIPS	STRENGTH I KIPS	STRENGTH III KIPS
L1	24	40	8
L13	23	40	7
L14	33	42	49
L26	34	42	50