

# Steel Design Report

Element: **Untitled3 (C:\DCC\steel4)**  
 Description:  
 Date: **08/20/2010 01:26 PM**

Company:  
 User:  
 Software: **Digital Canal Steel Design 4.0**

## GENERAL INFORMATION

Description	Value	Description	Value
Design Criteria	Design	Section Shape	W
Design Code	AISC ASD 13th Edition	Maximum Section Depth	36.00 In
Total Span Length	82.00 Ft	Minimum Section Depth	12.00 In
First Node Support	Fixed	Back-Back Distance (double angles only)	
Last Node Support	Free	Section Width (angles and tubes only)	
Total Load Deflection	L/240.00	Number of Solutions	10
Live Load Deflection	L/360.00	Live Load Patterning	Yes
Maximum Stress Ratio	1.000	Check Section List	
Bending Coefficient	1.0	Bottom Flange Bracing	20.00, 30.00, 24.00, 5.00 Ft
Steel Yield Stress	50 K/In <sup>2</sup>	Top Flange Bracing	10.00, 25.00, 27.00 Ft

## SPAN LENGTH DATA (Unit: Ft)

Span 1	20.00	Span 2	30.00	Span 3	24.00	Span 4	8.00
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## LOAD INFORMATION

### LOADS

Ref. No.	Load Case	Load Type	Dir	Begin Value	Begin Position	End Value	End Position
1	Dead	Linear	Y	-1.000 (K/Ft)	0.00 (Ft)	-1.000 (K/Ft)	82.000 (Ft)
2	Dead	Concen	Y	-8.000 (K)	82.00 (Ft)	-	-
3	Live	Linear	Y	-0.750 (K/Ft)	0.00 (Ft)	-0.750 (K/Ft)	82.000 (Ft)
4	Live	Concen	Y	-10.000 (K)	62.00 (Ft)	-	-

### LOAD COMBINATIONS

Ref. No.	Strength	Ref. No.	Service (Deflections)
1	DL Only	1	
2	DL + LL on Odd Spans	2	
3	DL + LL on Even Spans	3	
4	DL + LL on Spans-1-2-4	4	
5	DL + LL on Spans-1-2-3	5	
6	DL + LL on Spans-1-3-4	6	

## ELEMENT REPORTS

Note: Deflections are calculated based on  $E*I = 1e+3 \text{ In}^2$

### SPAN 1

Load Comb	Node No.	Inflection Points (Ft)	Axial (K)	Shear (K)	Moment (K-Ft)	Max Moment (K-Ft)	Distance (Ft)	Max Deflection (In)	Distance (Ft)
1	1	2.628	-0.000	7.398	-15.990	11.379	7.398	474.664	16.315
	2	12.169	0.000	-12.602	-68.020				
2	1	4.177	-0.000	17.297	-56.980	28.502	9.884	-1201.866	9.881
	2	15.591	0.000	-17.703	-61.041				
3	1	9.363	-0.000	3.894	7.375	14.956	3.894	1577.048	14.693
	2	20.000	0.000	-16.106	-114.750				
4	1	2.446	-0.000	12.580	-25.533	19.683	7.189	935.752	16.143
	2	11.931	0.000	-22.420	-123.934				
5	1	3.076	-0.000	13.939	-34.594	20.920	7.965	562.217	16.861
	2	12.855	0.000	-21.061	-105.811				
6	1	4.140	-0.000	17.150	-56.000	28.035	9.800	-1160.249	9.792
	2	15.460	0.000	-17.850	-63.000				

## SPAN 2

Load Comb	Node No.	Inflection Points (Ft)	Axial (K)	Shear (K)	Moment (K-Ft)	Max Moment (K-Ft)	Distance (Ft)	Max Deflection (In)	Distance (Ft)
1	2	5.313	-0.000	15.458	-68.020	51.459	15.458	-6343.132	15.334
	3	25.603	0.000	-14.542	-54.272				
2	2	5.604	-0.000	13.694	-61.041	32.727	13.694	-2615.380	13.493
	3	21.785	0.000	-16.306	-100.211				
3	2	5.003	-0.000	27.314	-114.750	98.407	15.608	-12702.654	15.406
	3	26.213	0.000	-25.186	-82.833				
4	2	5.391	-0.000	27.705	-123.934	95.372	15.831	-12071.034	15.574
	3	26.272	0.000	-24.795	-80.282				
5	2	5.075	-0.000	25.289	-105.811	76.909	14.451	-8535.578	14.531
	3	23.826	0.000	-27.211	-134.650				
6	2	5.664	-0.000	13.956	-63.000	34.379	13.956	-2971.042	13.855
	3	22.248	0.000	-16.044	-94.333				

## SPAN 3

Load Comb	Node No.	Inflection Points (Ft)	Axial (K)	Shear (K)	Moment (K-Ft)	Max Moment (K-Ft)	Distance (Ft)	Max Deflection (In)	Distance (Ft)
1	3	0.000	-0.000	10.261	-54.272	-1.625	10.261	2078.747	16.245
	4	24.000	0.000	-13.739	-96.000				
2	3	4.508	-0.000	26.175	-100.211	87.895	12.000	-5834.608	12.048
	4	19.638	0.000	-25.825	-96.000				
3	3	0.000	-0.000	10.451	-82.833	-28.218	10.451	5192.452	13.214
	4	24.000	0.000	-13.549	-120.000				
4	3	0.000	-0.000	10.345	-80.282	-26.772	10.345	5041.133	13.344
	4	24.000	0.000	-13.655	-120.000				
5	3	6.029	-0.000	27.610	-134.650	70.675	12.000	-3710.502	12.555
	4	19.257	0.000	-24.390	-96.000				
6	3	4.492	-0.000	24.931	-94.333	78.833	12.000	-4714.333	11.672
	4	18.637	0.000	-27.069	-120.000				

## SPAN 4

Load Comb	Node No.	Inflection Points (Ft)	Axial (K)	Shear (K)	Moment (K-Ft)	Max Moment (K-Ft)	Distance (Ft)	Max Deflection (In)	Distance (Ft)
1	4	0.000	-0.000	16.000	-96.000	0.000	0.000	-8899.271	8.000
	5	8.000	0.000	8.000	0.000				
2	4	0.000	-0.000	16.000	-96.000	0.000	0.000	-490.893	8.000
	5	8.000	0.000	8.000	0.000				
3	4	0.000	-0.000	22.000	-120.000	-0.001	8.000	-13796.352	8.000
	5	8.000	0.000	8.000	0.000				
4	4	0.000	-0.000	22.000	-120.000	-0.001	8.000	-13655.291	8.000
	5	8.000	0.000	8.000	0.000				
5	4	0.000	-0.000	16.000	-96.000	0.000	0.000	-2395.220	8.000
	5	8.000	0.000	8.000	0.000				
6	4	0.000	-0.000	22.000	-120.000	0.000	0.000	-3483.648	8.000
	5	8.000	0.000	8.000	0.000				

## REACTIONS

Node No.	Load Comb	PX (K)	PY (K)	Moment (K-Ft)
1	LC1: DL Only	-0.000	7.398	15.990
"	LC2: DL + LL on Odd Spans	-0.000	17.297	56.980
"	LC3: DL + LL on Even Spans	-0.000	3.894	-7.375
"	LC4: DL + LL on Spans-1-2-4	-0.000	12.580	25.533
"	LC5: DL + LL on Spans-1-2-3	-0.000	13.939	34.594
"	LC6: DL + LL on Spans-1-3-4	-0.000	17.150	56.000
2	LC1: DL Only	-0.000	28.060	-0.000
"	LC2: DL + LL on Odd Spans	-0.000	31.397	-0.000
"	LC3: DL + LL on Even Spans	-0.000	43.420	-0.000
"	LC4: DL + LL on Spans-1-2-4	-0.000	50.125	-0.000
"	LC5: DL + LL on Spans-1-2-3	-0.000	46.350	-0.000
"	LC6: DL + LL on Spans-1-3-4	-0.000	31.806	-0.000
3	LC1: DL Only	-0.000	24.803	0.000
"	LC2: DL + LL on Odd Spans	-0.000	42.481	-0.000
"	LC3: DL + LL on Even Spans	-0.000	35.638	0.000
"	LC4: DL + LL on Spans-1-2-4	-0.000	35.140	-0.000

"	LC5: DL + LL on Spans-1-2-3	-0.000	54.822	-0.000
"	LC6: DL + LL on Spans-1-3-4	-0.000	40.975	0.000
4	LC1: DL Only	-0.000	29.739	0.000
"	LC2: DL + LL on Odd Spans	-0.000	41.825	0.000
"	LC3: DL + LL on Even Spans	-0.000	35.549	0.000
"	LC4: DL + LL on Spans-1-2-4	-0.000	35.655	0.000
"	LC5: DL + LL on Spans-1-2-3	-0.000	40.390	0.000
"	LC6: DL + LL on Spans-1-3-4	-0.000	49.069	0.000

**CRITICAL MOMENT/SHEAR DETAILS**

Section Name: W12X72      Status: OK

**SPAN 1**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-123.934	234.942	0.528	LC4: DL + LL on Spans-1-2-4
<b>Shear-Y</b>	K	-22.420	105.780	0.212	LC4: DL + LL on Spans-1-2-4
<b>Total Deflection-Y</b>	In	0.091	1.000	0.091	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	0.091	0.667	0.137	LC3: DL + LL on Even Spans

**SPAN 2**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-134.650	197.673	0.681	LC5: DL + LL on Spans-1-2-3
<b>Shear-Y</b>	K	-27.211	105.780	0.257	LC5: DL + LL on Spans-1-2-3
<b>Total Deflection-Y</b>	In	-0.734	1.500	0.489	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	-0.367	1.000	0.367	LC3: DL + LL on Even Spans

**SPAN 3**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-134.650	220.034	0.612	LC5: DL + LL on Spans-1-2-3
<b>Shear-Y</b>	K	27.610	105.780	0.261	LC5: DL + LL on Spans-1-2-3
<b>Total Deflection-Y</b>	In	-0.337	1.200	0.281	LC2: DL + LL on Odd Spans
<b>Live Deflection-Y</b>	In	-0.446	0.800	0.557	LC2: DL + LL on Odd Spans

**SPAN 4**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-120.000	269.461	0.445	LC6: DL + LL on Spans-1-3-4
<b>Shear-Y</b>	K	22.000	105.780	0.208	LC6: DL + LL on Spans-1-3-4
<b>Total Deflection-Y</b>	In	-0.797	0.800	0.996	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	0.486	0.533	0.911	LC2: DL + LL on Odd Spans

Section Name: W14X61      Status: OK

**SPAN 1**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-123.934	198.091	0.626	LC4: DL + LL on Spans-1-2-4
<b>Shear-Y</b>	K	-22.420	104.250	0.215	LC4: DL + LL on Spans-1-2-4
<b>Total Deflection-Y</b>	In	0.085	1.000	0.085	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	0.085	0.667	0.127	LC3: DL + LL on Even Spans

**SPAN 2**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-134.650	143.249	0.940	LC5: DL + LL on Spans-1-2-3
<b>Shear-Y</b>	K	-27.211	104.250	0.261	LC5: DL + LL on Spans-1-2-3
<b>Total Deflection-Y</b>	In	-0.684	1.500	0.456	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	-0.343	1.000	0.343	LC3: DL + LL on Even Spans

**SPAN 3**

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-134.650	178.207	0.756	LC5: DL + LL on Spans-1-2-3

Shear-Y	K	27.610	104.250	0.265	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.314	1.200	0.262	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.416	0.800	0.520	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	254.491	0.472	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	104.250	0.211	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.743	0.800	0.929	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.453	0.533	0.849	LC2: DL + LL on Odd Spans

Section Name: W16X67 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	246.246	0.503	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	128.770	0.174	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.057	1.000	0.057	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.057	0.667	0.086	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	167.456	0.804	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	128.770	0.211	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.459	1.500	0.306	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.230	1.000	0.230	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	218.624	0.616	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	27.610	128.770	0.214	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.211	1.200	0.176	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.279	0.800	0.349	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	324.351	0.370	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	128.770	0.171	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.499	0.800	0.623	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.304	0.533	0.570	LC2: DL + LL on Odd Spans

Section Name: W18X76 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	315.200	0.393	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	154.700	0.145	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.041	1.000	0.041	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.041	0.667	0.061	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	219.190	0.614	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	154.700	0.176	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.329	1.500	0.220	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.165	1.000	0.165	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	281.256	0.479	LC5: DL + LL on Spans-1-2-3

Shear-Y	K	27.610	154.700	0.178	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.151	1.200	0.126	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.200	0.800	0.250	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	406.687	0.295	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	154.700	0.142	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.358	0.800	0.447	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.218	0.533	0.409	LC2: DL + LL on Odd Spans

Section Name: W21X73 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	248.305	0.499	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	192.920	0.116	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.034	1.000	0.034	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.034	0.667	0.051	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	139.501	0.965	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	192.920	0.141	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.274	1.500	0.183	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.137	1.000	0.137	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	189.713	0.710	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	27.610	192.920	0.143	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.126	1.200	0.105	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.166	0.800	0.208	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	429.142	0.280	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	192.920	0.114	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.297	0.800	0.372	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.181	0.533	0.340	LC2: DL + LL on Odd Spans

Section Name: W24X76 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	294.639	0.421	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	210.320	0.107	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.026	1.000	0.026	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.026	0.667	0.039	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	157.103	0.857	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	210.320	0.129	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.209	1.500	0.139	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.104	1.000	0.104	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	219.862	0.612	LC5: DL + LL on Spans-1-2-3

Shear-Y	K	27.610	210.320	0.131	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.096	1.200	0.080	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.127	0.800	0.158	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	499.002	0.240	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	210.320	0.105	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.227	0.800	0.283	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.138	0.533	0.259	LC2: DL + LL on Odd Spans

Section Name: W27X84 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	385.791	0.321	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	245.640	0.091	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.019	1.000	0.019	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.019	0.667	0.029	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	203.171	0.663	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	245.640	0.111	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.154	1.500	0.102	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.077	1.000	0.077	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	291.119	0.463	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	27.610	245.640	0.112	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.071	1.200	0.059	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.093	0.800	0.117	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	608.782	0.197	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	245.640	0.090	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.167	0.800	0.209	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.102	0.533	0.191	LC2: DL + LL on Odd Spans

Section Name: W30X90 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	447.057	0.277	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	249.072	0.090	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.015	1.000	0.015	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.015	0.667	0.023	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	231.451	0.582	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	249.072	0.109	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.121	1.500	0.081	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.061	1.000	0.061	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	336.397	0.400	LC5: DL + LL on Spans-1-2-3

Shear-Y	K	27.610	249.072	0.111	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.056	1.200	0.046	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.074	0.800	0.092	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	706.088	0.170	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	249.072	0.088	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.132	0.800	0.165	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.080	0.533	0.151	LC2: DL + LL on Odd Spans

Section Name: W33X118 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	719.829	0.172	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	325.060	0.069	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.009	1.000	0.009	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.009	0.667	0.014	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	412.915	0.326	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	325.060	0.084	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.074	1.500	0.049	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.037	1.000	0.037	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	602.340	0.224	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	27.610	325.060	0.085	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.034	1.200	0.028	LC2: DL + LL on Odd Spans
Live Deflection-Y	In	-0.045	0.800	0.056	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-120.000	1035.429	0.116	LC6: DL + LL on Spans-1-3-4
Shear-Y	K	22.000	325.060	0.068	LC6: DL + LL on Spans-1-3-4
Total Deflection-Y	In	-0.081	0.800	0.101	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.049	0.533	0.092	LC2: DL + LL on Odd Spans

Section Name: W36X135 Status: OK

## SPAN 1

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-123.934	901.037	0.138	LC4: DL + LL on Spans-1-2-4
Shear-Y	K	-22.420	383.713	0.058	LC4: DL + LL on Spans-1-2-4
Total Deflection-Y	In	0.007	1.000	0.007	LC3: DL + LL on Even Spans
Live Deflection-Y	In	0.007	0.667	0.010	LC3: DL + LL on Even Spans

## SPAN 2

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	531.720	0.253	LC5: DL + LL on Spans-1-2-3
Shear-Y	K	-27.211	383.713	0.071	LC5: DL + LL on Spans-1-2-3
Total Deflection-Y	In	-0.056	1.500	0.037	LC3: DL + LL on Even Spans
Live Deflection-Y	In	-0.028	1.000	0.028	LC3: DL + LL on Even Spans

## SPAN 3

	Unit	Load Effects	Resistance	Ratio	Load Combination
Bending-X	K-Ft	-134.650	773.750	0.174	LC5: DL + LL on Spans-1-2-3

<b>Shear-Y</b>	K	27.610	383.713	0.072	LC5: DL + LL on Spans-1-2-3
<b>Total Deflection-Y</b>	In	-0.026	1.200	0.021	LC2: DL + LL on Odd Spans
<b>Live Deflection-Y</b>	In	-0.034	0.800	0.043	LC2: DL + LL on Odd Spans

## SPAN 4

	Unit	Load Effects	Resistance	Ratio	Load Combination
<b>Bending-X</b>	K-Ft	-120.000	1269.960	0.094	LC6: DL + LL on Spans-1-3-4
<b>Shear-Y</b>	K	22.000	383.713	0.057	LC6: DL + LL on Spans-1-3-4
<b>Total Deflection-Y</b>	In	-0.061	0.800	0.076	LC3: DL + LL on Even Spans
<b>Live Deflection-Y</b>	In	0.037	0.533	0.070	LC2: DL + LL on Odd Spans