Cold Formed Steel Design Report

Element:	\\server18\home\khuntley\Documents\CSTCL Files\CFSD_Beam_Design.pdf	**Company:**	
Description:		**User:**	
Date:	12/May/2021 03:34:20 PM	**Software:**	Cold Formed Steel Design 1.0

GENERAL INFORMATION

Description	Value	Description	Value
Design Criteria	Design	Section Shape	C-Section with lip
Design Code	AISI 17th Edition LRFD	Maximum Section Depth	1.00 Ft
Total Span Length	82.00 Ft	Minimum Section Depth	0.33 Ft
First Node Support	Fixed	Section Width (angles and tubes only)	4.00 ft
Last Node Support	Free	Number Of Solutions	10
Total Load Deflection	L/240.00	Live Load Patterning	Yes
Live Load Deflection	L/360.00	Check Section List	
Maximum Stress Ratio	1.000	Bottom Flange Bracing	20.00, 30.00, 24.00Ft
Bending Coefficient	1.0	-	-
Steel Yield Stress	8640000.00 Lb/Ft^2	-	-

SPAN LENGTH DATA(Unit:Ft)

Span 1	**20.00**	**Span 2**	**30.00**	**Span 3**	**24.00**	**Span 4**	**8.00**

LOAD INFORMATION

Loads

Ref. No.	Description	Load Case	Load Type	Dir	Begin Value	Begin Position	End Value	End Position
1	DL1	Dead	Linear	Y	-1.000 (Lb/Ft)	0.000 (Ft)	-1.000 (Lb/Ft)	82.000 (Ft)
2	DL2	Dead	Concen	Y	-8.000 (Lb)	82.00 (Ft)	-	-
3	LL1	Live	Linear	Y	-0.750 (Lb/Ft)	0.000 (Ft)	-0.750 (Lb/Ft)	82.000 (Ft)
4	LL2	Live	Concen	Y	-12.000 (Lb)	35.00 (Ft)	-	-

LOAD COMBINATIONS

Ref. No.	Strength	Ref. No.	Service(Deflections)
1	1.40DL	1	DL Only
2	1.2 DL + 1.6 LL on Odd Spans	2	DL + LL on Odd Spans
3	1.2 DL + 1.6 LL on Even Spans	3	DL + LL on Even Spans
4	1.2 DL + 1.6 LL on Spans-1-2-4	4	DL + LL on Spans-1-2-4
5	1.2 DL + 1.6 LL on Spans-1-2-3	5	DL + LL on Spans-1-2-3
6	1.2 DL + 1.6 LL on Spans-1-3-4	6	DL + LL on Spans-1-3-4
7	1.00DL + 1.00LL + 1.00WL + 1.00SL + 1.00EL	7	

CRITICAL MOMENT/SHEAR SUMMARY

Ref. No.	Section Name	Status	Governing Criteria	Bending Ratio	LC	Shear Ratio	LC	Deflection Ratio-LL	LC	Deflection Ratio-TL	LC
1	4CS4x059	OK	BENDING	0.527	3	0.007	4	0.181	3	0.289	3
2	6CS4x059	OK	BENDING	0.594	3	0.009	4	0.074	3	0.117	3
3	7CS4x059	OK	BENDING	0.529	3	0.011	4	0.052	3	0.083	3
4	8CS4x065	OK	BENDING	0.341	3	0.010	4	0.035	3	0.056	3
5	10CS4x085	OK	BENDING	0.112	3	0.006	4	0.016	3	0.026	3
6	12CS4x105	OK	BENDING	0.046	3	0.004	4	0.009	3	0.014	3

Recommended: 4CS4x059