Job Information

	Engineer	Checked	Approved
Name:	PvB		
Date:	3/9/2022		

Project ID	
Project Name	

Structure Type	SPACE FRAME

Number of Nodes	100	Highest Node	100
Number of Elements	155	Highest Beam	183

Number of Basic Load Cases	5
Number of Combination Load Cases	1

Included in this printout are data for:

All	The Whole Structure

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	LOAD CASE 1 - SELFWEIGHT
Primary	2	LOAD CASE 2 - D ROOF
Primary	3	LOAD CASE 3 - LR ROOF
Primary	4	LOAD CASE 4 - D FLOOR
Primary	5	LOAD CASE 5 - L FLOOR
Combination	6	COMBINATION LOAD CASE 6

Nodes

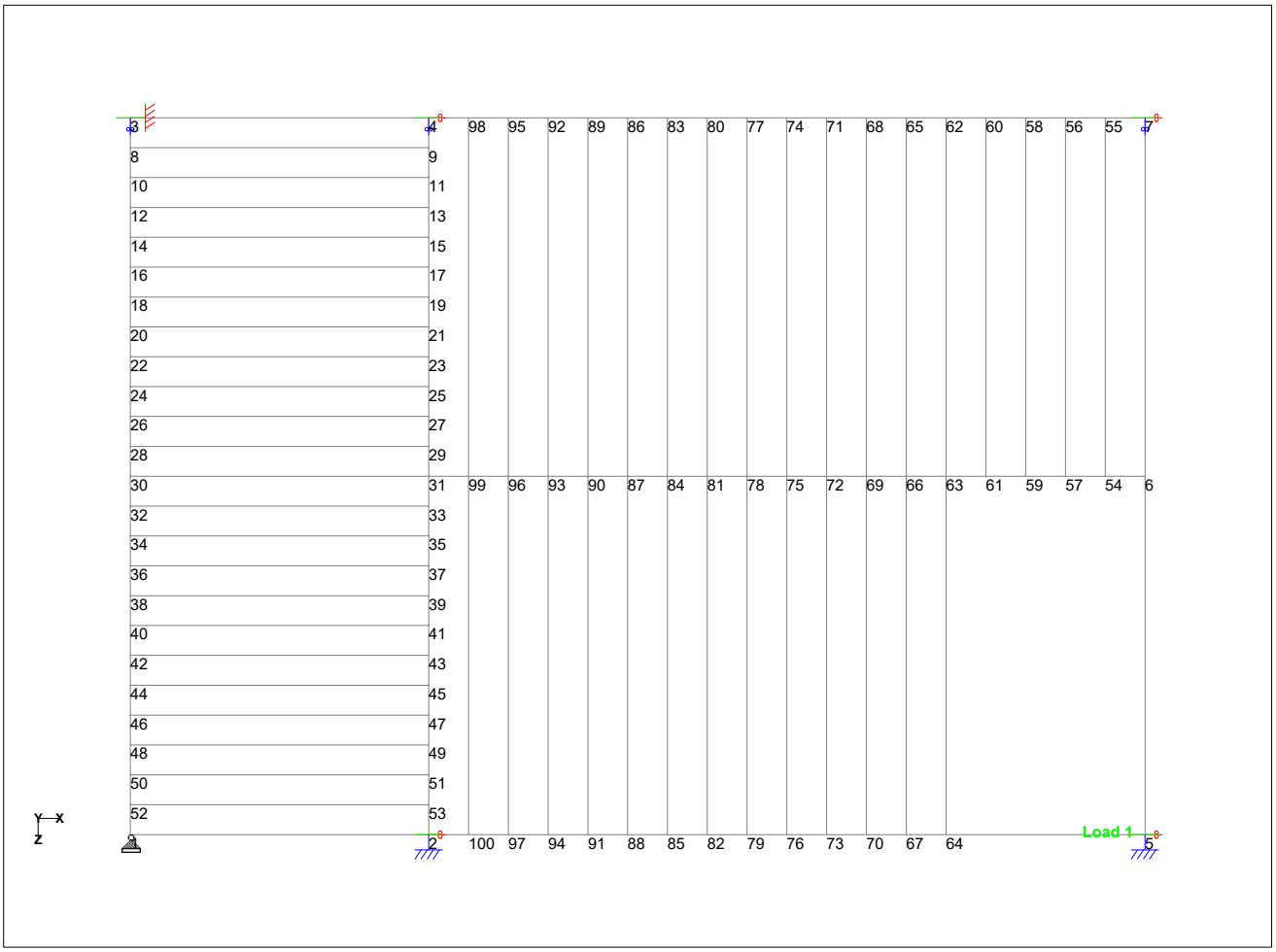
Node	X (ft)	Y (ft)	Z (ft)
1	0.000	0.000	0.000
2	10.000	0.000	0.000
3	0.000	-0.000	-24.000
4	10.000	-0.000	-24.000
5	34.000	0.000	0.000
6	34.000	-0.000	-12.000
7	34.000	-0.000	-24.000
8	0.000	-0.000	-23.000
9	10.000	-0.000	-23.000
10	0.000	-0.000	-22.000
11	10.000	-0.000	-22.000
12	0.000	-0.000	-21.000
13	10.000	-0.000	-21.000
14	0.000	-0.000	-20.000

Nodes Cont...

Node	X (ft)	Y (ft)	Z (ft)
18	0.000	-0.000	-18.000
19	10.000	-0.000	-18.000
20	0.000	-0.000	-17.000
21	10.000	-0.000	-17.000
22	0.000	-0.000	-16.000
23	10.000	-0.000	-16.000
24	0.000	-0.000	-15.000
25	10.000	-0.000	-15.000
26	0.000	-0.000	-14.000
27	10.000	-0.000	-14.000
28	0.000	-0.000	-13.000
29	10.000	-0.000	-13.000
30	0.000	-0.000	-12.000
31	10.000	-0.000	-12.000
32	0.000	-0.000	-11.000
33	10.000	-0.000	-11.000
34	0.000	-0.000	-10.000
35	10.000	-0.000	-10.000
36	0.000	-0.000	-9.000
37	10.000	-0.000	-9.000
38	0.000	-0.000	-8.000
39	10.000	-0.000	-8.000
40	0.000	-0.000	-7.000
41	10.000	-0.000	-7.000
42	0.000	-0.000	-6.000
43	10.000	-0.000	-6.000
44	0.000	-0.000	-5.000
45	10.000	-0.000	-5.000
46	0.000	-0.000	-4.000
47	10.000	-0.000	-4.000
48	0.000	-0.000	-3.000
49	10.000	-0.000	-3.000
50	0.000	-0.000	-2.000
51	10.000	-0.000	-2.000
52	0.000	-0.000	-1.000
53	10.000	-0.000	-1.000
54	32.667	-0.000	-12.000
55	32.667	-0.000	-24.000
56	31.333	-0.000	-24.000
57	31.333	-0.000	-12.000
58	30.000	-0.000	-24.000
59	30.000	-0.000	-12.000
60	28.667	-0.000	-24.000
61	28.667	-0.000	-12.000
62	27.333	-0.000	-24.000

Nodes Cont...

Node	X (ft)	Y (ft)	Z (ft)
63	27.333	-0.000	-12.000
64	27.333	0.000	0.000
65	26.000	-0.000	-24.000
66	26.000	-0.000	-12.000
67	26.000	0.000	0.000
68	24.667	-0.000	-24.000
69	24.667	-0.000	-12.000
70	24.667	0.000	0.000
71	23.333	-0.000	-24.000
72	23.333	-0.000	-12.000
73	23.333	0.000	0.000
74	22.000	-0.000	-24.000
75	22.000	-0.000	-12.000
76	22.000	0.000	0.000
77	20.667	-0.000	-24.000
78	20.667	-0.000	-12.000
79	20.667	0.000	0.000
80	19.333	-0.000	-24.000
81	19.333	-0.000	-12.000
82	19.333	0.000	0.000
83	18.000	-0.000	-24.000
84	18.000	-0.000	-12.000
85	18.000	0.000	0.000
86	16.667	-0.000	-24.000
87	16.667	-0.000	-12.000
88	16.667	0.000	0.000
89	15.333	-0.000	-24.000
90	15.333	-0.000	-12.000
91	15.333	0.000	0.000
92	14.000	-0.000	-24.000
93	14.000	-0.000	-12.000
94	14.000	0.000	0.000
95	12.667	-0.000	-24.000
96	12.667	-0.000	-12.000
97	12.667	0.000	0.000
98	11.333	-0.000	-24.000
99	11.333	-0.000	-12.000
100	11.333	0.000	0.000



Node Numbers (Input data was modified after picture taken)

Beams

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
1	1	2	10.000	8	0
2	3	4	10.000	8	0
3	5	6	12.000	6	0
4	6	7	12.000	6	0
5	8	9	10.000	8	0
6	3	8	1.000	4	0
7	4	9	1.000	5	0
8	10	11	10.000	8	0
9	9	11	1.000	5	0
10	8	10	1.000	4	0
11	12	13	10.000	8	0
12	11	13	1.000	5	0
13	10	12	1.000	4	0

Beams Cont...

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
14	14	15	10.000	8	0
15	13	15	1.000	5	0
16	12	14	1.000	4	0
17	16	17	10.000	8	0
18	15	17	1.000	5	0
19	14	16	1.000	4	0
20	18	19	10.000	8	0
21	17	19	1.000	5	0
22	16	18	1.000	4	0
23	20	21	10.000	8	0
24	19	21	1.000	5	0
25	18	20	1.000	4	0
26	22	23	10.000	8	0
27	21	23	1.000	5	0
28	20	22	1.000	4	0
29	24	25	10.000	8	0
30	23	25	1.000	5	0
31	22	24	1.000	4	0
32	26	27	10.000	8	0
33	25	27	1.000	5	0
34	24	26	1.000	4	0
35	28	29	10.000	8	0
36	27	29	1.000	5	0
37	26	28	1.000	4	0
38	30	31	10.000	8	0
39	29	31	1.000	5	0
40	28	30	1.000	4	0
41	32	33	10.000	8	0
42	31	33	1.000	5	0
43	30	32	1.000	4	0
44	34	35	10.000	8	0
45	33	35	1.000	5	0
46	32	34	1.000	4	0
47	36	37	10.000	8	0
48	35	37	1.000	5	0
49	34	36	1.000	4	0
50	38	39	10.000	8	0
51	37	39	1.000	5	0
52	36	38	1.000	4	0
53	40	41	10.000	8	0
54	39	41	1.000	5	0
55	38	40	1.000	4	0
56	42	43	10.000	8	0
57	41	43	1.000	5	0
58	40	42	1.000	4	0

Beams Cont...

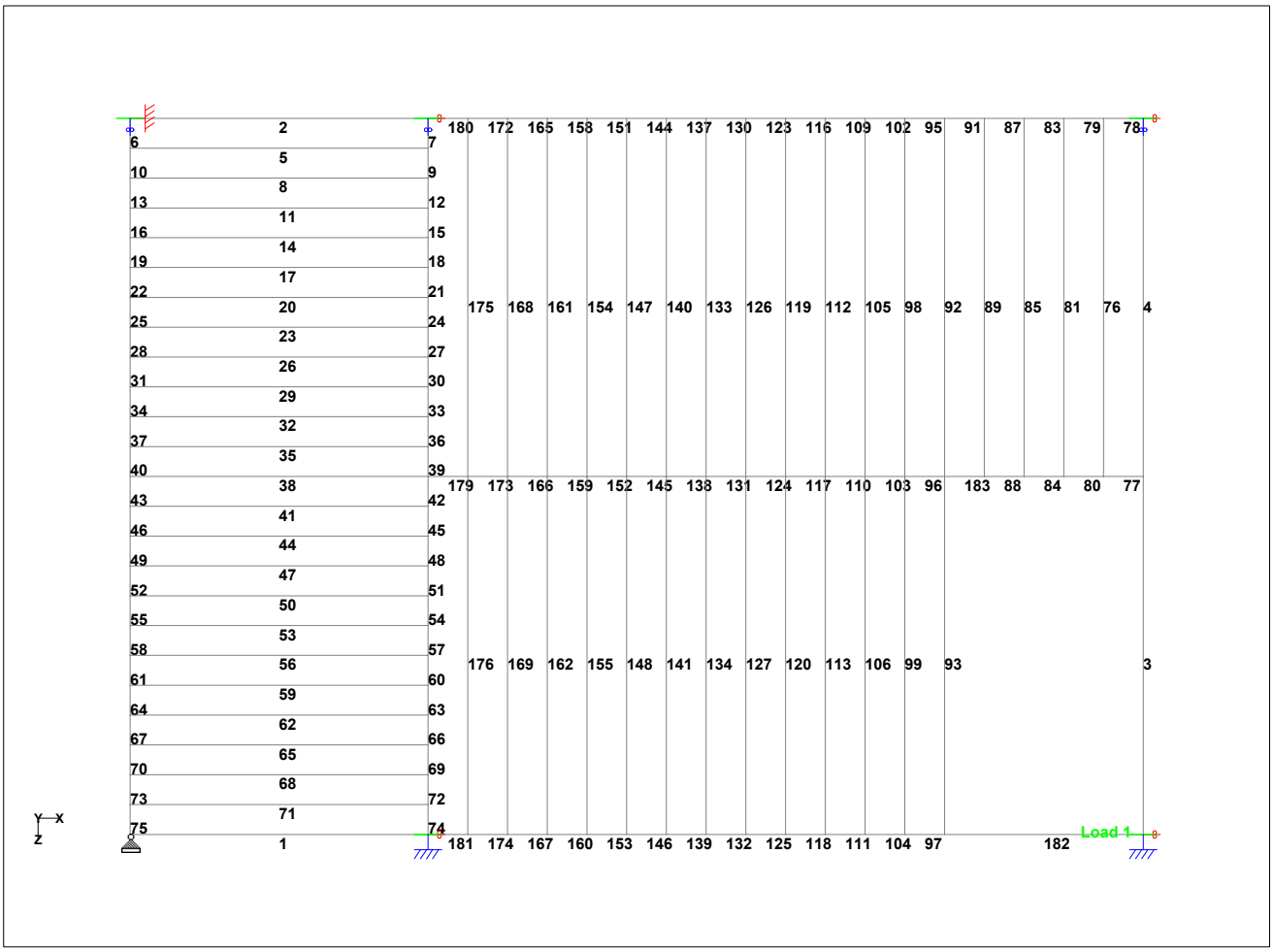
Beam	Node A	Node B	Length (ft)	Property	β (degrees)
59	44	45	10.000	8	0
60	43	45	1.000	5	0
61	42	44	1.000	4	0
62	46	47	10.000	8	0
63	45	47	1.000	5	0
64	44	46	1.000	4	0
65	48	49	10.000	8	0
66	47	49	1.000	5	0
67	46	48	1.000	4	0
68	50	51	10.000	8	0
69	49	51	1.000	5	0
70	48	50	1.000	4	0
71	52	53	10.000	8	0
72	51	53	1.000	5	0
73	50	52	1.000	4	0
74	53	2	1.000	5	0
75	52	1	1.000	4	0
76	54	55	12.000	7	0
77	54	6	1.333	2	0
78	55	7	1.333	1	0
79	56	55	1.333	1	0
80	57	54	1.333	2	0
81	57	56	12.000	7	0
83	58	56	1.333	1	0
84	59	57	1.333	2	0
85	59	58	12.000	7	0
87	60	58	1.333	1	0
88	61	59	1.333	2	0
89	61	60	12.000	7	0
91	62	60	1.333	1	0
92	63	62	12.000	7	0
93	64	63	12.000	7	0
95	65	62	1.333	1	0
96	66	63	1.333	2	0
97	67	64	1.333	3	0
98	66	65	12.000	7	0
99	67	66	12.000	7	0
102	68	65	1.333	1	0
103	69	66	1.333	2	0
104	70	67	1.333	3	0
105	69	68	12.000	7	0
106	70	69	12.000	7	0
109	71	68	1.333	1	0
110	72	69	1.333	2	0
111	73	70	1.333	3	0

Beams Cont...

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
112	72	71	12.000	7	0
113	73	72	12.000	7	0
116	74	71	1.333	1	0
117	75	72	1.333	2	0
118	76	73	1.333	3	0
119	75	74	12.000	7	0
120	76	75	12.000	7	0
123	77	74	1.333	1	0
124	78	75	1.333	2	0
125	79	76	1.333	3	0
126	78	77	12.000	7	0
127	79	78	12.000	7	0
130	80	77	1.333	1	0
131	81	78	1.333	2	0
132	82	79	1.333	3	0
133	81	80	12.000	7	0
134	82	81	12.000	7	0
137	83	80	1.333	1	0
138	84	81	1.333	2	0
139	85	82	1.333	3	0
140	84	83	12.000	7	0
141	85	84	12.000	7	0
144	86	83	1.333	1	0
145	87	84	1.333	2	0
146	88	85	1.333	3	0
147	87	86	12.000	7	0
148	88	87	12.000	7	0
151	89	86	1.333	1	0
152	90	87	1.333	2	0
153	91	88	1.333	3	0
154	90	89	12.000	7	0
155	91	90	12.000	7	0
158	92	89	1.333	1	0
159	93	90	1.333	2	0
160	94	91	1.333	3	0
161	93	92	12.000	7	0
162	94	93	12.000	7	0
165	95	92	1.333	1	0
166	96	93	1.333	2	0
167	97	94	1.333	3	0
168	96	95	12.000	7	0
169	97	96	12.000	7	0
172	98	95	1.333	1	0
173	99	96	1.333	2	0
174	100	97	1.333	3	0

Beams Cont...

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
175	99	98	12.000	7	0
176	100	99	12.000	7	0
179	99	31	1.333	2	0
180	98	4	1.333	1	0
181	100	2	1.333	3	0
182	5	64	6.667	3	0
183	61	63	1.333	2	0



Beam Numbers (Input data was modified after picture taken)

Section Properties

Prop	Section	Area (in^2)	I_{yy} (in^4)	I_{zz} (in^4)	J (in^4)	Material
1	Rect 19.50x5.13	99.938	218.743	3.17E+3	730.156	GLT-24F-V4_D
2	Rect 27.00x5.50	148.500	374.344	9.02E+3	1.31E+3	GLT-24F-V4_D
3	Rect 18.00x5.13	92.250	201.917	2.49E+3	662.872	GLT-24F-V4_D
4	Rect 12.00x2.50	30.000	15.625	360.000	54.298	GLT-24F-V4_D
5	Rect 19.50x5.13	99.938	218.743	3.17E+3	730.156	GLT-24F-V4_D
6	Rect 19.50x5.13	99.938	218.743	3.17E+3	730.156	GLT-24F-V4_D
7	HMFR_SS_2X8	11.250	2.109	52.734	0.000	HMFR_SS_2X
8	HMFR_SS_2X6	8.250	1.547	20.797	0.000	HMFR_SS_2X

Materials

Mat	Name	E (kip/in^2)	ν	Density (kip/in^3)	α (/°F)
1	HMFR_SS_2X8	1.6E+3	0.150	0.000	5.5E -6
2	GLT-24F-V4_DF/DF	1.6E+3	0.150	0.000	5.5E -6
3	HMFR_SS_2X6	1.6E+3	0.150	0.000	5.5E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
1	Fixed	Fixed	Fixed	-	-	-
2	-	Fixed	Fixed	Fixed	Fixed	Fixed
3	Fixed	Fixed	-	Fixed	Fixed	Fixed
4	-	Fixed	-	Fixed	Fixed	Fixed
5	-	Fixed	Fixed	Fixed	Fixed	Fixed
7	-	Fixed	-	Fixed	Fixed	Fixed

Primary Load Cases

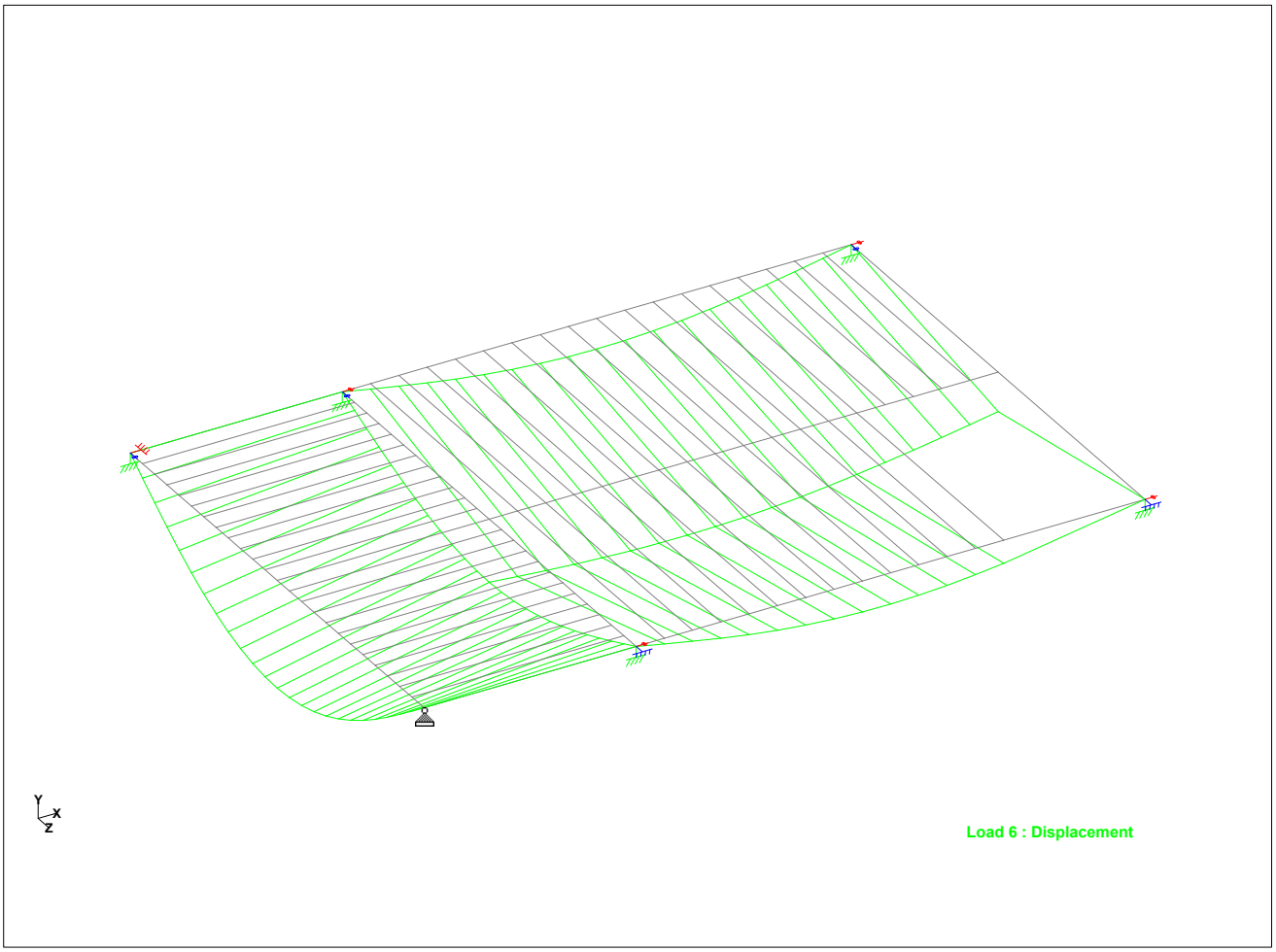
Number	Name	Type
1	LOAD CASE 1 - SELFWEIGHT	Dead
2	LOAD CASE 2 - D ROOF	Dead
3	LOAD CASE 3 - LR ROOF	Roof Live
4	LOAD CASE 4 - D FLOOR	Dead
5	LOAD CASE 5 - L FLOOR	Live

Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
6	COMBINATION LOAD CASE 6	1	LOAD CASE 1 - SELFWEIGHT	1.00
		2	LOAD CASE 2 - D ROOF	1.00
		3	LOAD CASE 3 - LR ROOF	1.00
		4	LOAD CASE 4 - D FLOOR	1.00
		5	LOAD CASE 5 - L FLOOR	1.00

Node Displacement Summary

	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Max X	1	1:LOAD CASE	**0.000**	0.000	0.000	0.000	-0.002	0.000	0.000
Min X	1	1:LOAD CASE	**0.000**	0.000	0.000	0.000	-0.002	0.000	0.000
Max Y	73	3:LOAD CASE	0.000	**0.002**	-0.000	0.002	0.000	0.000	0.000
Min Y	30	6:COMBINATIC	0.000	**-1.523**	0.000	1.523	-0.000	0.000	0.000
Max Z	75	6:COMBINATIC	0.000	-1.015	**0.000**	1.015	-0.000	0.000	0.001
Min Z	3	6:COMBINATIC	0.000	0.000	**-0.000**	0.000	0.000	0.000	0.000
Max rX	8	6:COMBINATIC	0.000	-0.205	0.000	0.205	**0.017**	0.000	0.000
Min rX	1	6:COMBINATIC	0.000	0.000	0.000	0.000	**-0.017**	0.000	0.000
Max rY	55	6:COMBINATIC	0.000	-0.077	0.000	0.077	0.000	**0.000**	0.005
Min rY	100	6:COMBINATIC	0.000	-0.081	0.000	0.081	0.000	**-0.000**	-0.005
Max rZ	55	6:COMBINATIC	0.000	-0.077	0.000	0.077	0.000	0.000	**0.005**
Min rZ	100	6:COMBINATIC	0.000	-0.081	0.000	0.081	0.000	-0.000	**-0.005**
Max Rst	30	6:COMBINATIC	0.000	-1.523	0.000	**1.523**	-0.000	0.000	0.000



Beam Deflection (Input data was modified after picture taken)

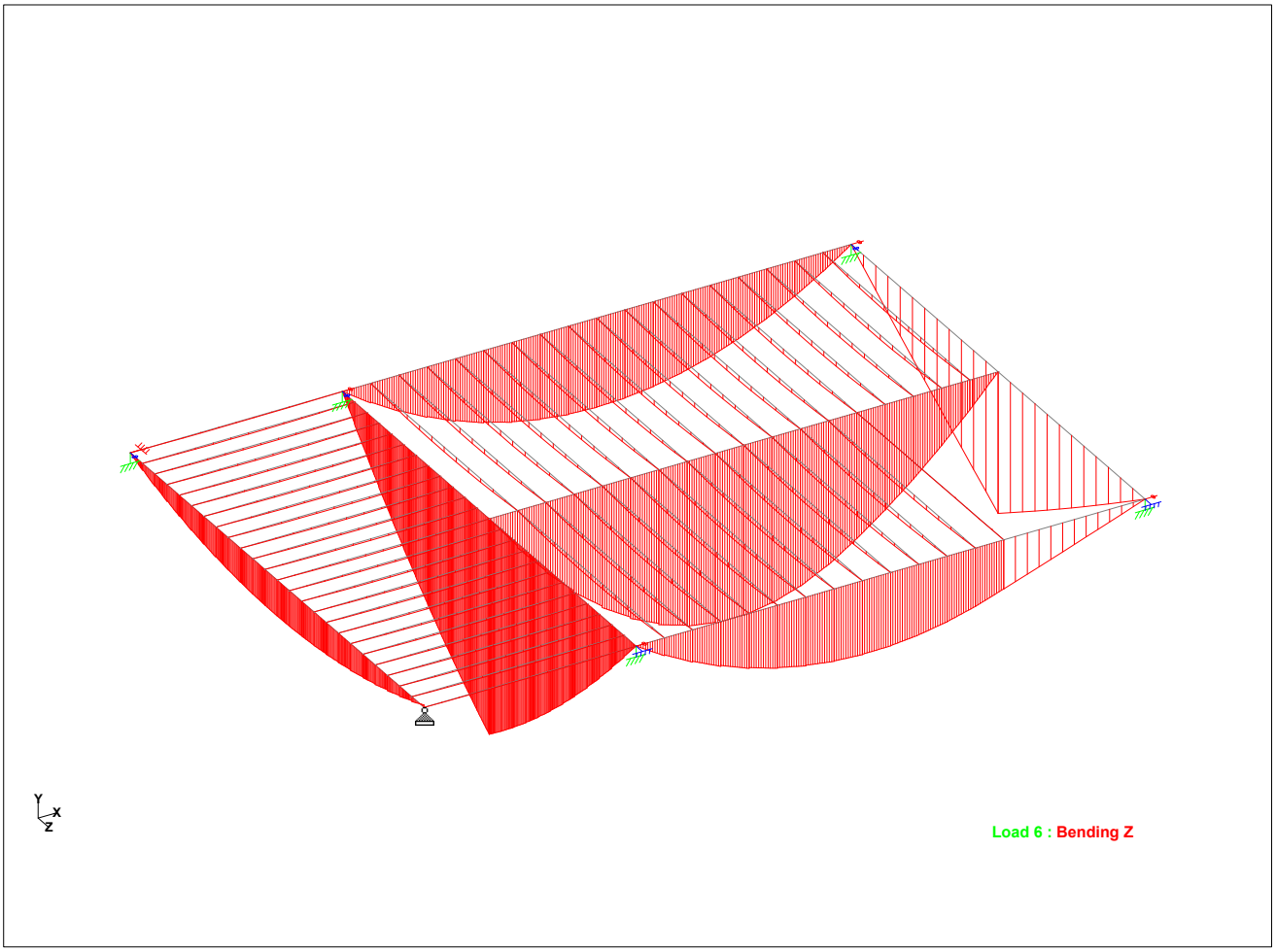
Beam Force Detail Summary

Sign convention as diagrams:- positive above line, negative below line except Fx where positive is compression. Distance d is given from beam end A.

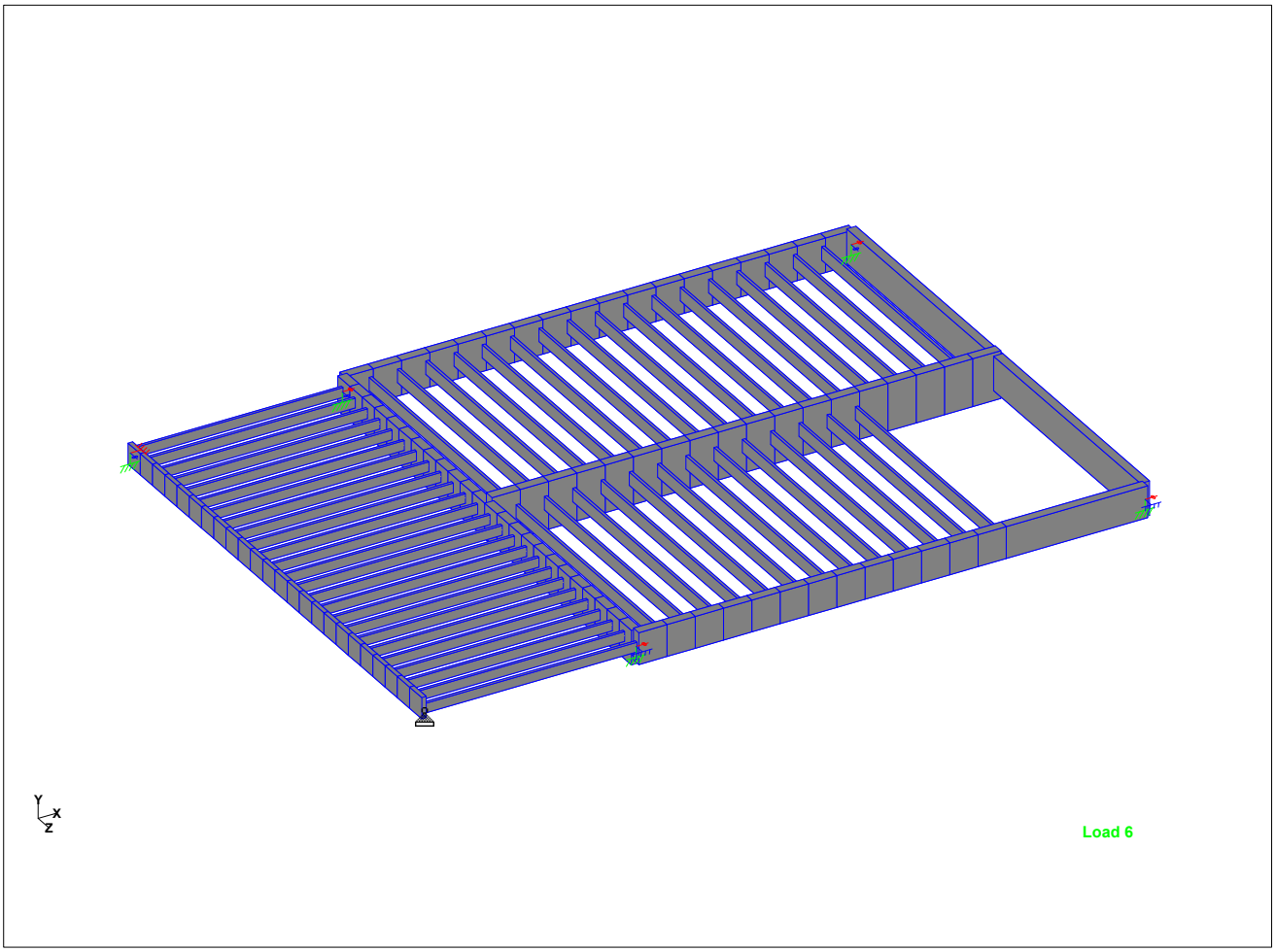
				Axial	Shear		Torsion	Bending	
	Beam	L/C	d (ft)	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-in)	My (kip-in)	Mz (kip-in)
Max Fx	7	6:COMBINATIC	0.000	**0.000**	4.983	0.000	0.000	0.000	0.000
Min Fx	75	6:COMBINATIC	0.000	**-0.000**	-1.674	0.000	0.000	0.000	-13.536
Max Fy	173	6:COMBINATIC	0.000	0.000	**5.492**	-0.000	-0.005	-0.000	-105.160
Min Fy	179	6:COMBINATIC	1.333	-0.000	**-6.278**	-0.000	-0.005	-0.000	-0.000
Max Fz	77	6:COMBINATIC	0.000	0.000	-5.250	**0.000**	-0.005	-0.000	-84.345
Min Fz	179	6:COMBINATIC	0.000	0.000	-6.234	**-0.000**	-0.005	0.000	-100.103
Max Mx	5	3:LOAD CASE	0.000	0.000	0.100	-0.000	**3.335**	0.000	0.000
Min Mx	1	6:COMBINATIC	0.000	0.000	0.072	0.000	**-6.591**	0.000	0.000
Max My	183	6:COMBINATIC	1.333	-0.000	3.588	0.000	-0.005	**0.000**	-356.409
Min My	117	6:COMBINATIC	0.000	0.000	-0.802	0.000	-0.005	**-0.000**	-481.398

Beam Force Detail Summary Cont...

				Axial	Shear		Torsion	Bending	
	Beam	L/C	d (ft)	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-in)	My (kip-in)	Mz (kip-in)
Max Mz	75	6:COMBINATIC	1.000	-0.000	-1.681	-0.000	-0.000	-0.000	**6.591**
Min Mz	39	6:COMBINATIC	1.000	0.000	3.208	-0.000	-0.000	-0.000	**-609.281**



Mz 60kip-in:1ft 6 COMBINATION LOAD CASE 6 (Input data was modified after picture taken)



Full Sections (Input data was modified after picture taken)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
1	HMFR_SS_2	HMFR_SS_2	0.140	1.000	0.140			8.250	20.800	1.547	68.820
2	HMFR_SS_2	HMFR_SS_2	0.140	1.000	0.140			8.250	20.800	1.547	68.820
3	Rect 19.50x5	Rect	0.686	1.000	0.686			99.938	3.17E+3	218.743	730.156
4	Rect 19.50x5	Rect	0.686	1.000	0.686			99.938	3.17E+3	218.743	730.156
5	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
6	Rect 12.00x2	Rect	0.872	1.000	0.872			30.000	360.000	15.625	54.298
7	Rect 19.50x5	Rect	0.798	1.000	0.798			99.938	3.17E+3	218.743	730.156
8	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
9	Rect 19.50x5	Rect	0.772	1.000	0.772			99.938	3.17E+3	218.743	730.156
10	Rect 12.00x2	Rect	0.795	1.000	0.795			30.000	360.000	15.625	54.298
11	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
12	Rect 19.50x5	Rect	0.747	1.000	0.747			99.938	3.17E+3	218.743	730.156
13	Rect 12.00x2	Rect	0.718	1.000	0.718			30.000	360.000	15.625	54.298

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
14	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
15	Rect 19.50x5	Rect	0.721	1.000	0.721			99.938	3.17E+3	218.743	730.156
16	Rect 12.00x2	Rect	0.641	1.000	0.641			30.000	360.000	15.625	54.298
17	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
18	Rect 19.50x5	Rect	0.298	1.000	0.298			99.938	3.17E+3	218.743	730.156
19	Rect 12.00x2	Rect	0.565	1.000	0.565			30.000	360.000	15.625	54.298
20	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
21	Rect 19.50x5	Rect	0.352	1.000	0.352			99.938	3.17E+3	218.743	730.156
22	Rect 12.00x2	Rect	0.437	1.000	0.437			30.000	360.000	15.625	54.298
23	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
24	Rect 19.50x5	Rect	0.403	1.000	0.403			99.938	3.17E+3	218.743	730.156
25	Rect 12.00x2	Rect	0.478	1.000	0.478			30.000	360.000	15.625	54.298
26	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
27	Rect 19.50x5	Rect	0.453	1.000	0.453			99.938	3.17E+3	218.743	730.156
28	Rect 12.00x2	Rect	0.511	1.000	0.511			30.000	360.000	15.625	54.298
29	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
30	Rect 19.50x5	Rect	0.499	1.000	0.499			99.938	3.17E+3	218.743	730.156
31	Rect 12.00x2	Rect	0.536	1.000	0.536			30.000	360.000	15.625	54.298
32	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
33	Rect 19.50x5	Rect	0.544	1.000	0.544			99.938	3.17E+3	218.743	730.156
34	Rect 12.00x2	Rect	0.554	1.000	0.554			30.000	360.000	15.625	54.298
35	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
36	Rect 19.50x5	Rect	0.586	1.000	0.586			99.938	3.17E+3	218.743	730.156
37	Rect 12.00x2	Rect	0.564	1.000	0.564			30.000	360.000	15.625	54.298
38	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
39	Rect 19.50x5	Rect	0.626	1.000	0.626			99.938	3.17E+3	218.743	730.156
40	Rect 12.00x2	Rect	0.566	1.000	0.566			30.000	360.000	15.625	54.298
41	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
42	Rect 19.50x5	Rect	0.626	1.000	0.626			99.938	3.17E+3	218.743	730.156
43	Rect 12.00x2	Rect	0.566	1.000	0.566			30.000	360.000	15.625	54.298
44	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
45	Rect 19.50x5	Rect	0.586	1.000	0.586			99.938	3.17E+3	218.743	730.156
46	Rect 12.00x2	Rect	0.561	1.000	0.561			30.000	360.000	15.625	54.298
47	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
48	Rect 19.50x5	Rect	0.568	1.000	0.568			99.938	3.17E+3	218.743	730.156
49	Rect 12.00x2	Rect	0.549	1.000	0.549			30.000	360.000	15.625	54.298
50	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
51	Rect 19.50x5	Rect	0.594	1.000	0.594			99.938	3.17E+3	218.743	730.156
52	Rect 12.00x2	Rect	0.529	1.000	0.529			30.000	360.000	15.625	54.298
53	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
54	Rect 19.50x5	Rect	0.619	1.000	0.619			99.938	3.17E+3	218.743	730.156
55	Rect 12.00x2	Rect	0.501	1.000	0.501			30.000	360.000	15.625	54.298
56	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
57	Rect 19.50x5	Rect	0.645	1.000	0.645			99.938	3.17E+3	218.743	730.156
58	Rect 12.00x2	Rect	0.465	1.000	0.465			30.000	360.000	15.625	54.298

Utilization Ratio Cont...

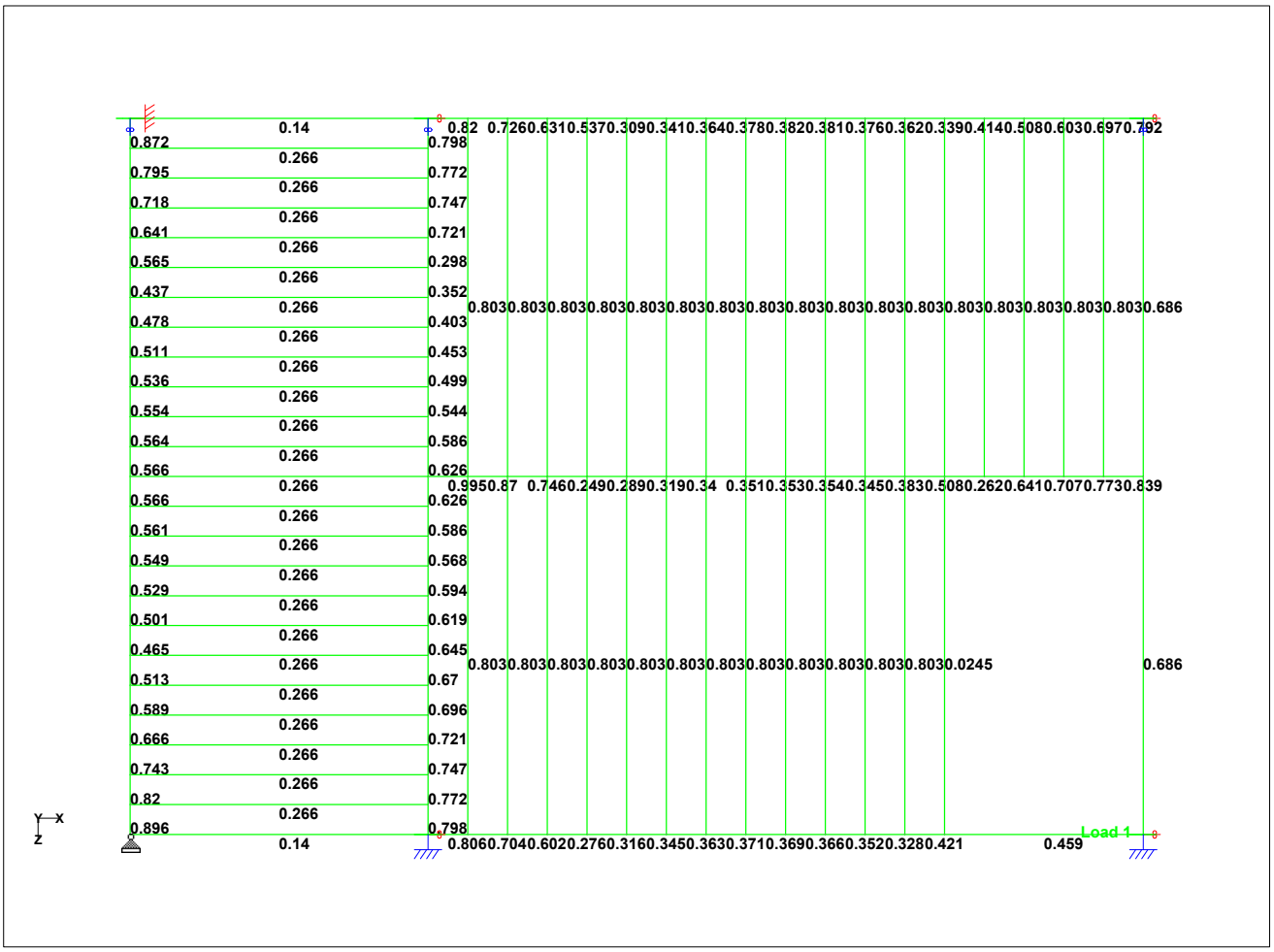
Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
59	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
60	Rect 19.50x5	Rect	0.670	1.000	0.670			99.938	3.17E+3	218.743	730.156
61	Rect 12.00x2	Rect	0.513	1.000	0.513			30.000	360.000	15.625	54.298
62	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
63	Rect 19.50x5	Rect	0.696	1.000	0.696			99.938	3.17E+3	218.743	730.156
64	Rect 12.00x2	Rect	0.589	1.000	0.589			30.000	360.000	15.625	54.298
65	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
66	Rect 19.50x5	Rect	0.721	1.000	0.721			99.938	3.17E+3	218.743	730.156
67	Rect 12.00x2	Rect	0.666	1.000	0.666			30.000	360.000	15.625	54.298
68	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
69	Rect 19.50x5	Rect	0.747	1.000	0.747			99.938	3.17E+3	218.743	730.156
70	Rect 12.00x2	Rect	0.743	1.000	0.743			30.000	360.000	15.625	54.298
71	HMFR_SS_2	HMFR_SS_2	0.266	1.000	0.266			8.250	20.800	1.547	68.820
72	Rect 19.50x5	Rect	0.772	1.000	0.772			99.938	3.17E+3	218.743	730.156
73	Rect 12.00x2	Rect	0.820	1.000	0.820			30.000	360.000	15.625	54.298
74	Rect 19.50x5	Rect	0.798	1.000	0.798			99.938	3.17E+3	218.743	730.156
75	Rect 12.00x2	Rect	0.896	1.000	0.896			30.000	360.000	15.625	54.298
76	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
77	Rect 27.00x5	Rect	0.839	1.000	0.839			148.500	9.02E+3	374.344	1.31E+3
78	Rect 19.50x5	Rect	0.792	1.000	0.792			99.938	3.17E+3	218.743	730.156
79	Rect 19.50x5	Rect	0.697	1.000	0.697			99.938	3.17E+3	218.743	730.156
80	Rect 27.00x5	Rect	0.773	1.000	0.773			148.500	9.02E+3	374.344	1.31E+3
81	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
83	Rect 19.50x5	Rect	0.603	1.000	0.603			99.938	3.17E+3	218.743	730.156
84	Rect 27.00x5	Rect	0.707	1.000	0.707			148.500	9.02E+3	374.344	1.31E+3
85	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
87	Rect 19.50x5	Rect	0.508	1.000	0.508			99.938	3.17E+3	218.743	730.156
88	Rect 27.00x5	Rect	0.641	1.000	0.641			148.500	9.02E+3	374.344	1.31E+3
89	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
91	Rect 19.50x5	Rect	0.414	1.000	0.414			99.938	3.17E+3	218.743	730.156
92	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
93	HMFR_SS_2	HMFR_SS_2	0.025	1.000	0.025			10.880	47.630	2.039	184.220
95	Rect 19.50x5	Rect	0.339	1.000	0.339			99.938	3.17E+3	218.743	730.156
96	Rect 27.00x5	Rect	0.508	1.000	0.508			148.500	9.02E+3	374.344	1.31E+3
97	Rect 18.00x5	Rect	0.421	1.000	0.421			92.250	2.49E+3	201.917	662.872
98	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
99	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
102	Rect 19.50x5	Rect	0.362	1.000	0.362			99.938	3.17E+3	218.743	730.156
103	Rect 27.00x5	Rect	0.383	1.000	0.383			148.500	9.02E+3	374.344	1.31E+3
104	Rect 18.00x5	Rect	0.328	1.000	0.328			92.250	2.49E+3	201.917	662.872
105	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
106	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
109	Rect 19.50x5	Rect	0.376	1.000	0.376			99.938	3.17E+3	218.743	730.156
110	Rect 27.00x5	Rect	0.345	1.000	0.345			148.500	9.02E+3	374.344	1.31E+3
111	Rect 18.00x5	Rect	0.352	1.000	0.352			92.250	2.49E+3	201.917	662.872

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
112	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
113	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
116	Rect 19.50x5	Rect	0.381	1.000	0.381			99.938	3.17E+3	218.743	730.156
117	Rect 27.00x5	Rect	0.354	1.000	0.354			148.500	9.02E+3	374.344	1.31E+3
118	Rect 18.00x5	Rect	0.366	1.000	0.366			92.250	2.49E+3	201.917	662.872
119	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
120	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
123	Rect 19.50x5	Rect	0.382	1.000	0.382			99.938	3.17E+3	218.743	730.156
124	Rect 27.00x5	Rect	0.353	1.000	0.353			148.500	9.02E+3	374.344	1.31E+3
125	Rect 18.00x5	Rect	0.369	1.000	0.369			92.250	2.49E+3	201.917	662.872
126	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
127	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
130	Rect 19.50x5	Rect	0.378	1.000	0.378			99.938	3.17E+3	218.743	730.156
131	Rect 27.00x5	Rect	0.351	1.000	0.351			148.500	9.02E+3	374.344	1.31E+3
132	Rect 18.00x5	Rect	0.371	1.000	0.371			92.250	2.49E+3	201.917	662.872
133	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
134	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
137	Rect 19.50x5	Rect	0.364	1.000	0.364			99.938	3.17E+3	218.743	730.156
138	Rect 27.00x5	Rect	0.340	1.000	0.340			148.500	9.02E+3	374.344	1.31E+3
139	Rect 18.00x5	Rect	0.363	1.000	0.363			92.250	2.49E+3	201.917	662.872
140	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
141	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
144	Rect 19.50x5	Rect	0.341	1.000	0.341			99.938	3.17E+3	218.743	730.156
145	Rect 27.00x5	Rect	0.319	1.000	0.319			148.500	9.02E+3	374.344	1.31E+3
146	Rect 18.00x5	Rect	0.345	1.000	0.345			92.250	2.49E+3	201.917	662.872
147	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
148	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
151	Rect 19.50x5	Rect	0.309	1.000	0.309			99.938	3.17E+3	218.743	730.156
152	Rect 27.00x5	Rect	0.289	1.000	0.289			148.500	9.02E+3	374.344	1.31E+3
153	Rect 18.00x5	Rect	0.316	1.000	0.316			92.250	2.49E+3	201.917	662.872
154	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
155	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
158	Rect 19.50x5	Rect	0.537	1.000	0.537			99.938	3.17E+3	218.743	730.156
159	Rect 27.00x5	Rect	0.249	1.000	0.249			148.500	9.02E+3	374.344	1.31E+3
160	Rect 18.00x5	Rect	0.276	1.000	0.276			92.250	2.49E+3	201.917	662.872
161	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
162	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
165	Rect 19.50x5	Rect	0.631	1.000	0.631			99.938	3.17E+3	218.743	730.156
166	Rect 27.00x5	Rect	0.746	1.000	0.746			148.500	9.02E+3	374.344	1.31E+3
167	Rect 18.00x5	Rect	0.602	1.000	0.602			92.250	2.49E+3	201.917	662.872
168	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
169	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
172	Rect 19.50x5	Rect	0.726	1.000	0.726			99.938	3.17E+3	218.743	730.156
173	Rect 27.00x5	Rect	0.870	1.000	0.870			148.500	9.02E+3	374.344	1.31E+3
174	Rect 18.00x5	Rect	0.704	1.000	0.704			92.250	2.49E+3	201.917	662.872

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
175	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
176	HMFR_SS_2	HMFR_SS_2	0.803	1.000	0.803			10.880	47.630	2.039	184.220
179	Rect 27.00x5	Rect	0.995	1.000	0.995			148.500	9.02E+3	374.344	1.31E+3
180	Rect 19.50x5	Rect	0.820	1.000	0.820			99.938	3.17E+3	218.743	730.156
181	Rect 18.00x5	Rect	0.806	1.000	0.806			92.250	2.49E+3	201.917	662.872
182	Rect 18.00x5	Rect	0.459	1.000	0.459			92.250	2.49E+3	201.917	662.872
183	Rect 27.00x5	Rect	0.262	1.000	0.262			148.500	9.02E+3	374.344	1.31E+3



Utilization Ratio (Input data was modified after picture taken)