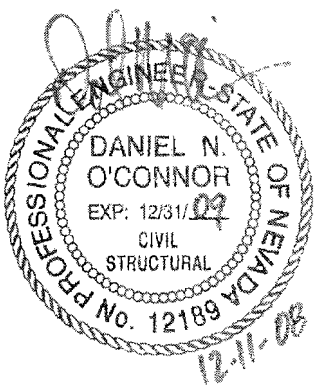
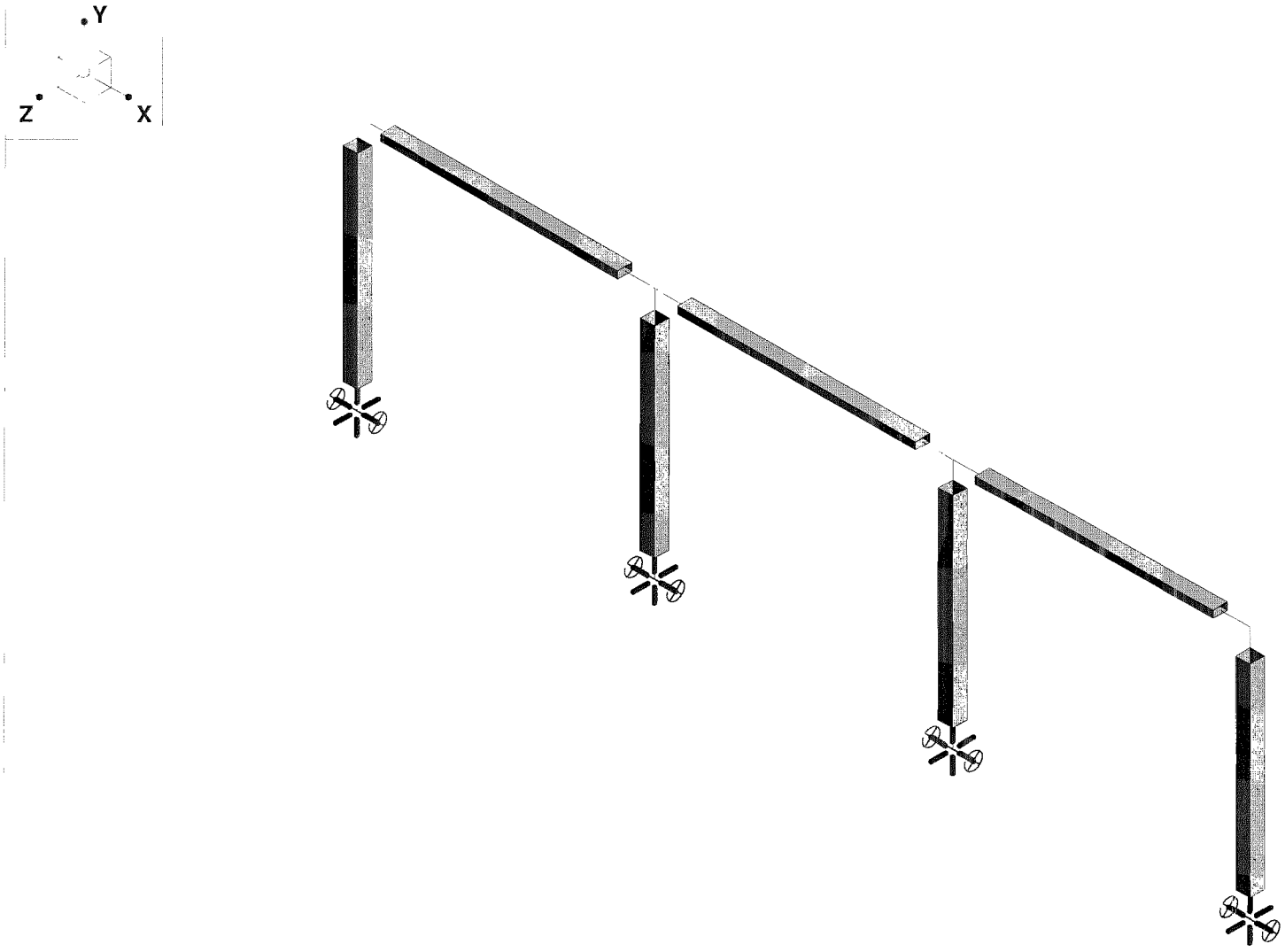
D6—2" SQ x 36-1/2" HIGH RAIL WITH 2"x1" RECT TOP RAIL WITHOUT BOTTOM RAIL

Building Code:	**2006 *International Building Code*** **2007 *California Building Code*** **AISC *Steel Construction Manual*, 13th ed—ASD**
Material:	**Carbon Steel, A500, Grade B, Fy = 42 ksi** **Stainless Steel, A554, Grade MT-304 or MT-316, Fy = 30 ksi** **Stainless Steel, LDX 2101 (UNS S32101), Fy = 60 ksi (Anchor Post)**
Height:	**36.5"**
Anchor Post:	Carbon Steel: **HSS 2x2x1/4 Tube** Stainless Steel: **2"x2"x0.188" Tube (LDX 2101)**
Intermediate Posts:	Carbon Steel: **HSS 2x2x1/8 Tube** Stainless Steel: **2"x2"x0.120" Tube**
Top Rail:	Carbon Steel: **HSS 2x1x1/8 Tube** Stainless Steel: **2"x1"x0.120" Tube**
Bottom Rail:	**None**
Number of Cables:	**10**
Cable Spacing:	**3.23"**



Disclaimer: Analysis and Structural Certification DOES NOT include base plates or anchorage to supporting structure. Where required by the Local Building Official, these shall be reviewed and designed by the project Structural Engineer of Record.



Ferrari Shields & Associates

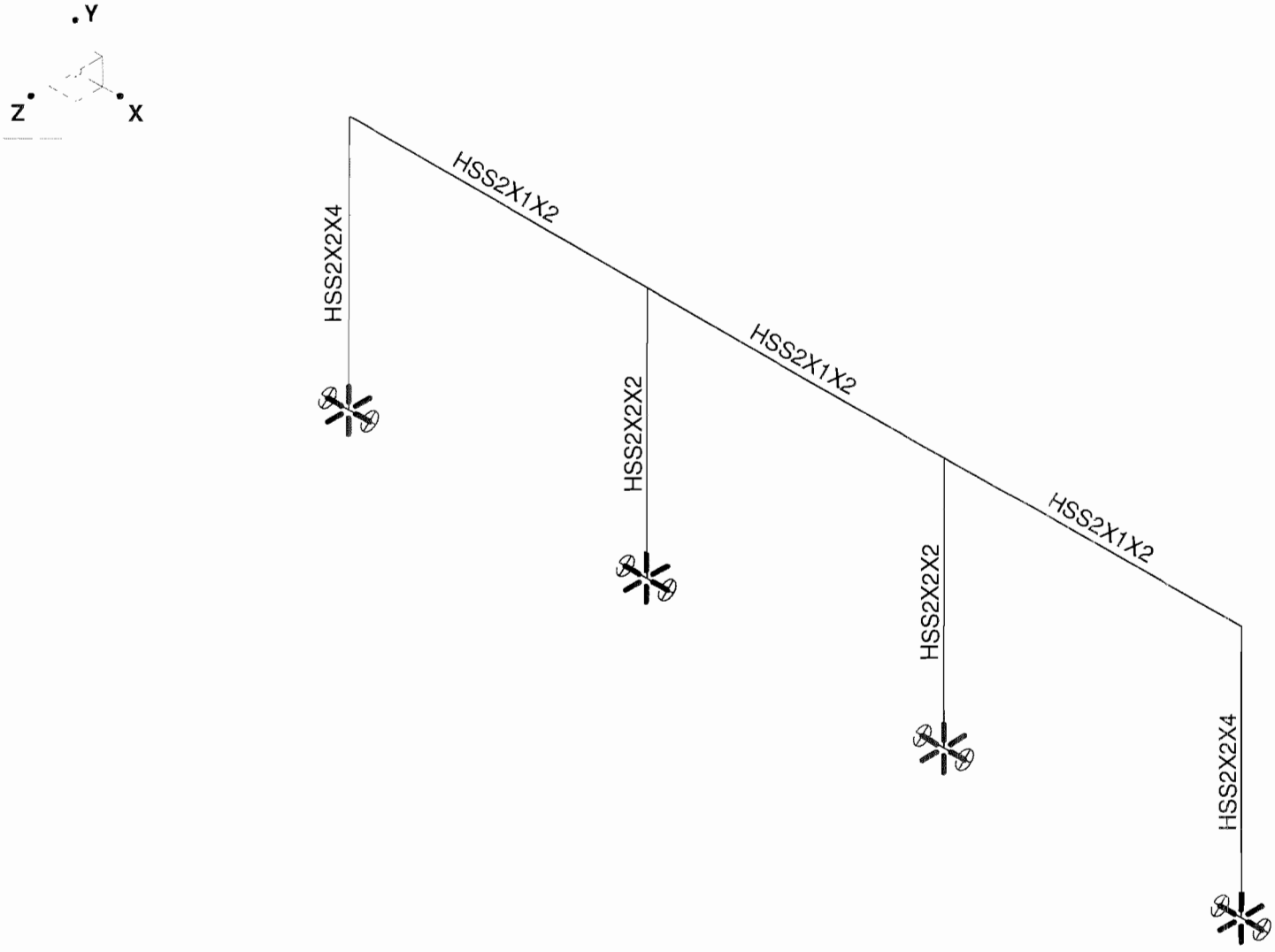
D. O'Connor

08196

D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:22 AM

D6.R3D



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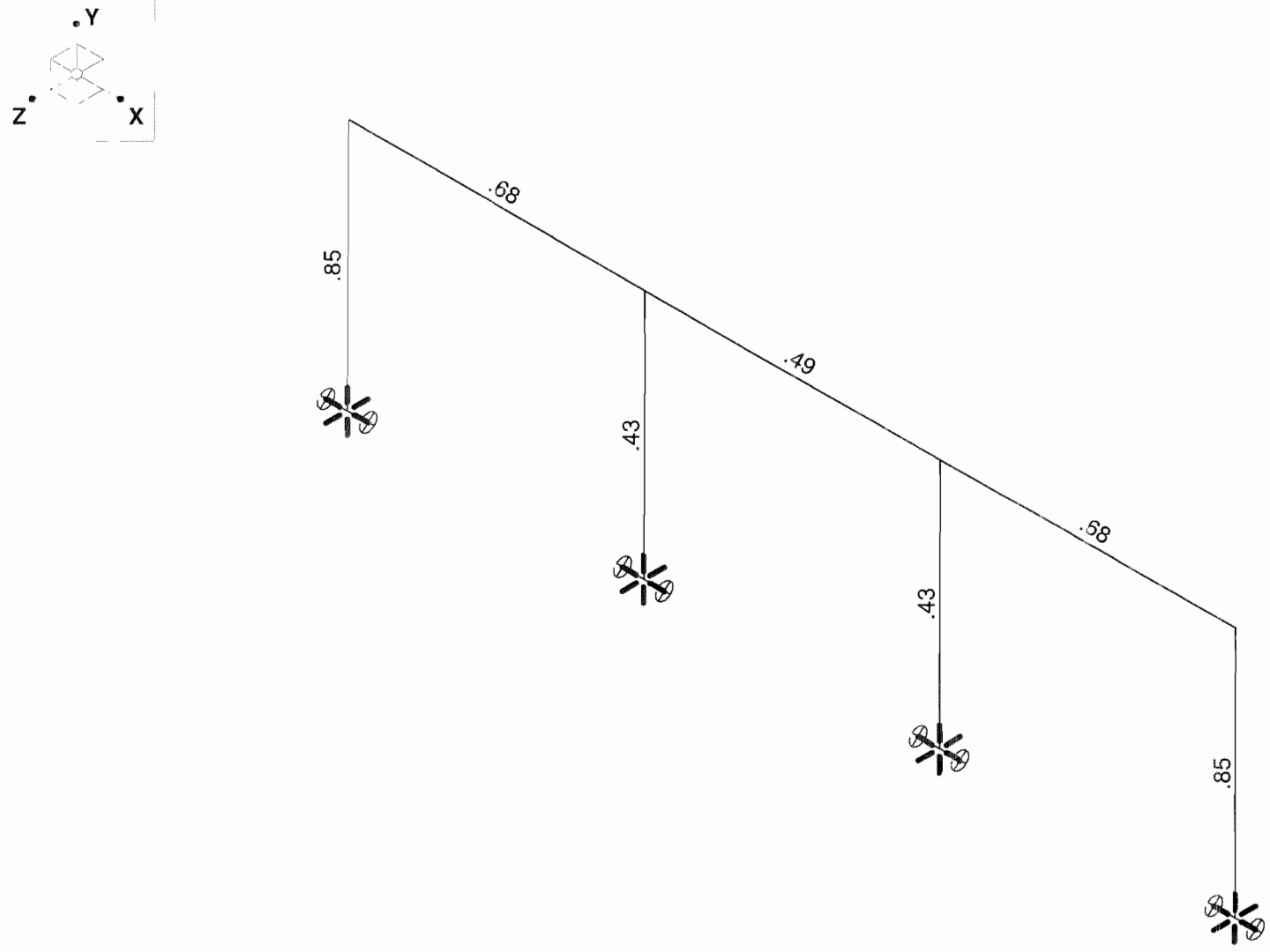

Member Code Checks Displayed
Solution: Envelope

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D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

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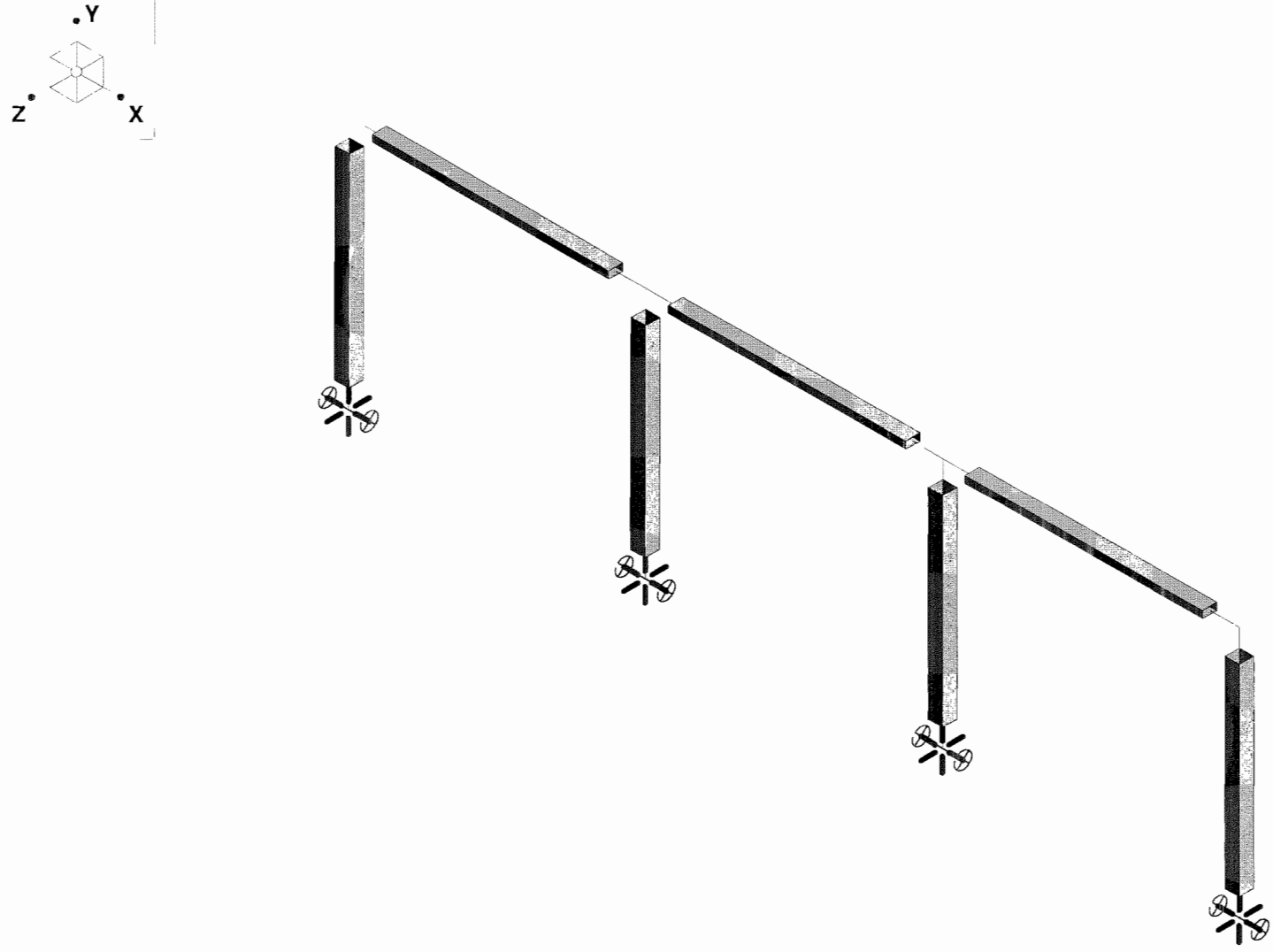
D6.R3D



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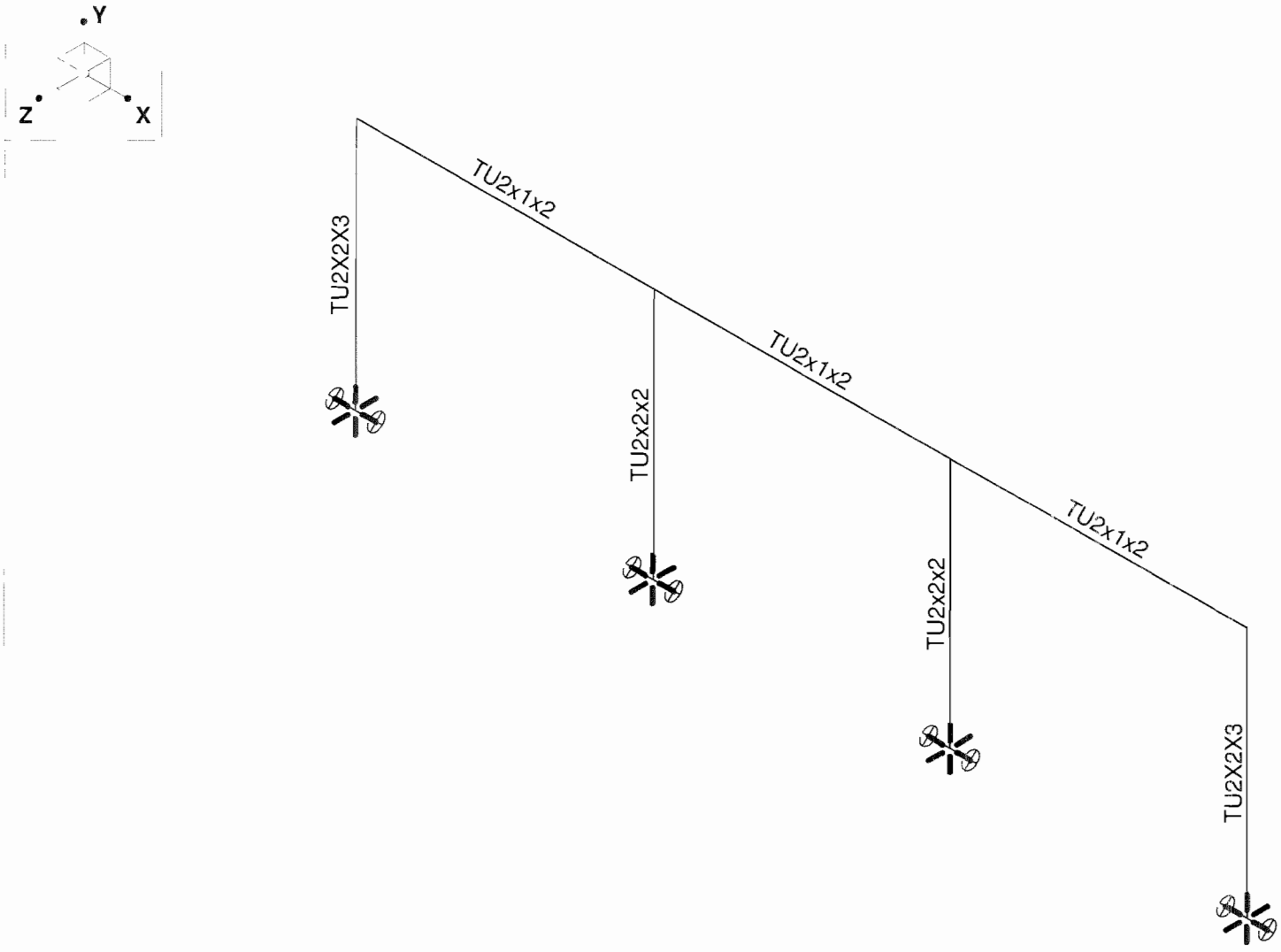
D6 (SS) - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Dec 10, 2008 at 10:27 AM

D6-ss.R3D



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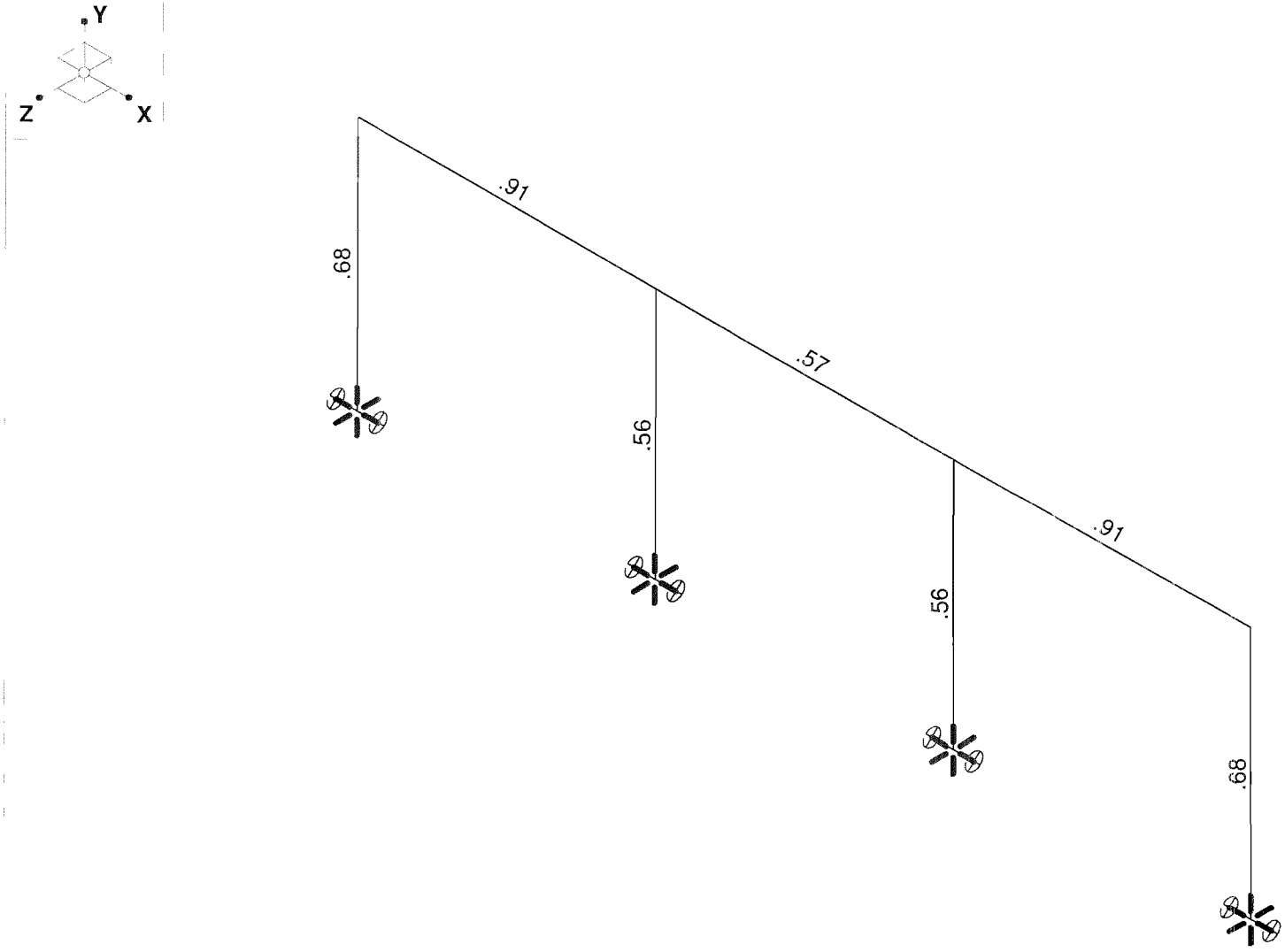
D6 (SS) - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

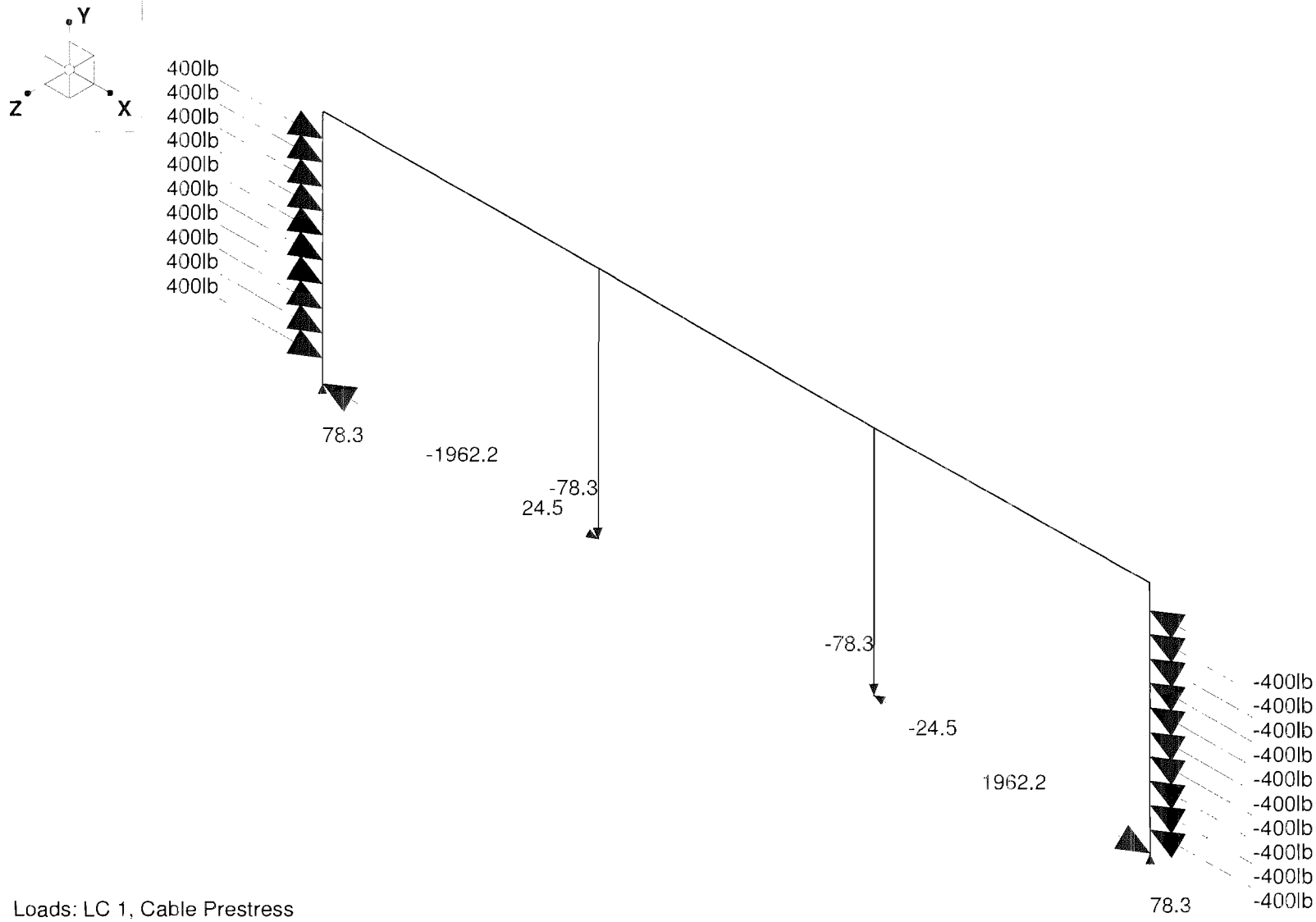
Dec 10, 2008 at 10:27 AM

D6-ss.R3D



Member Code Checks Displayed
Solution: Envelope

Ferrari Shields & Associates	D6 (SS) - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL	
D. O'Connor		Dec 10, 2008 at 10:27 AM
08196		D6-ss.R3D



Loads: LC 1, Cable Prestress
Results for LC 1, Cable Prestress
Reaction units are lb and lb-ft

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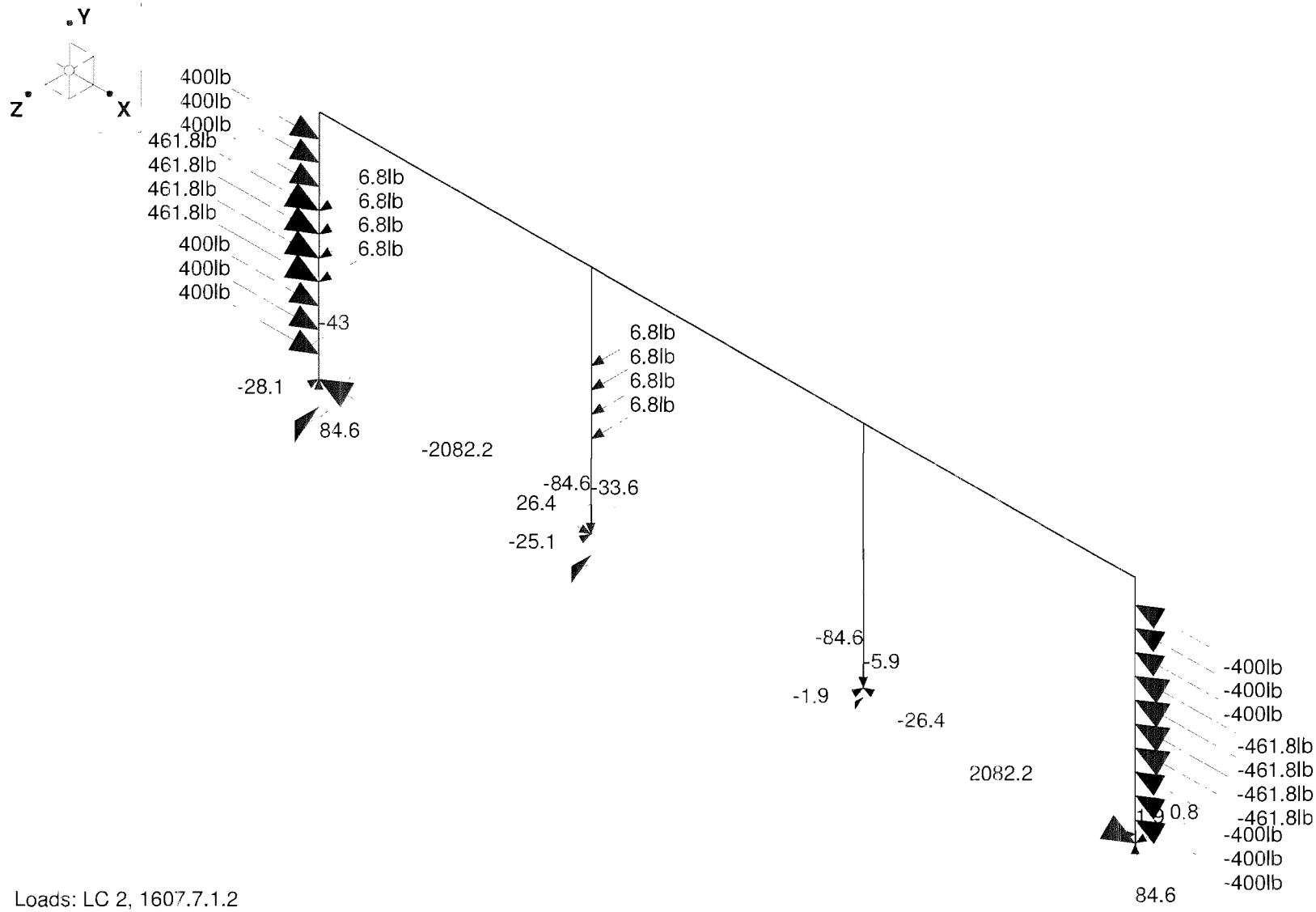
D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:24 AM

D6.R3D



Loads: LC 2, 1607.7.1.2
Results for LC 2, 1607.7.1.2
Reaction units are lb and lb-ft

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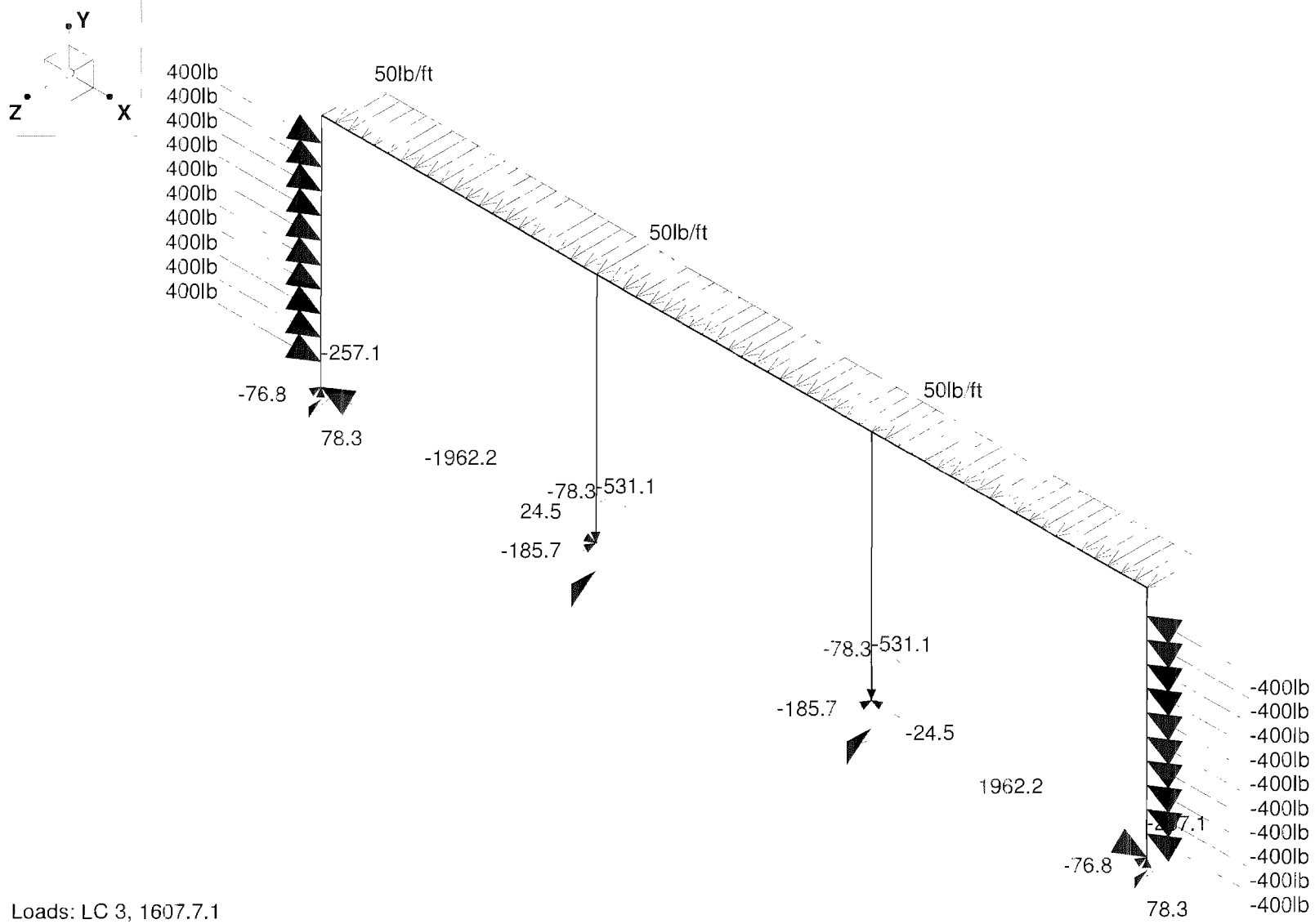
D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:24 AM

D6.R3D



Loads: LC 3, 1607.7.1
Results for LC 3, 1607.7.1
Reaction units are lb and lb-ft

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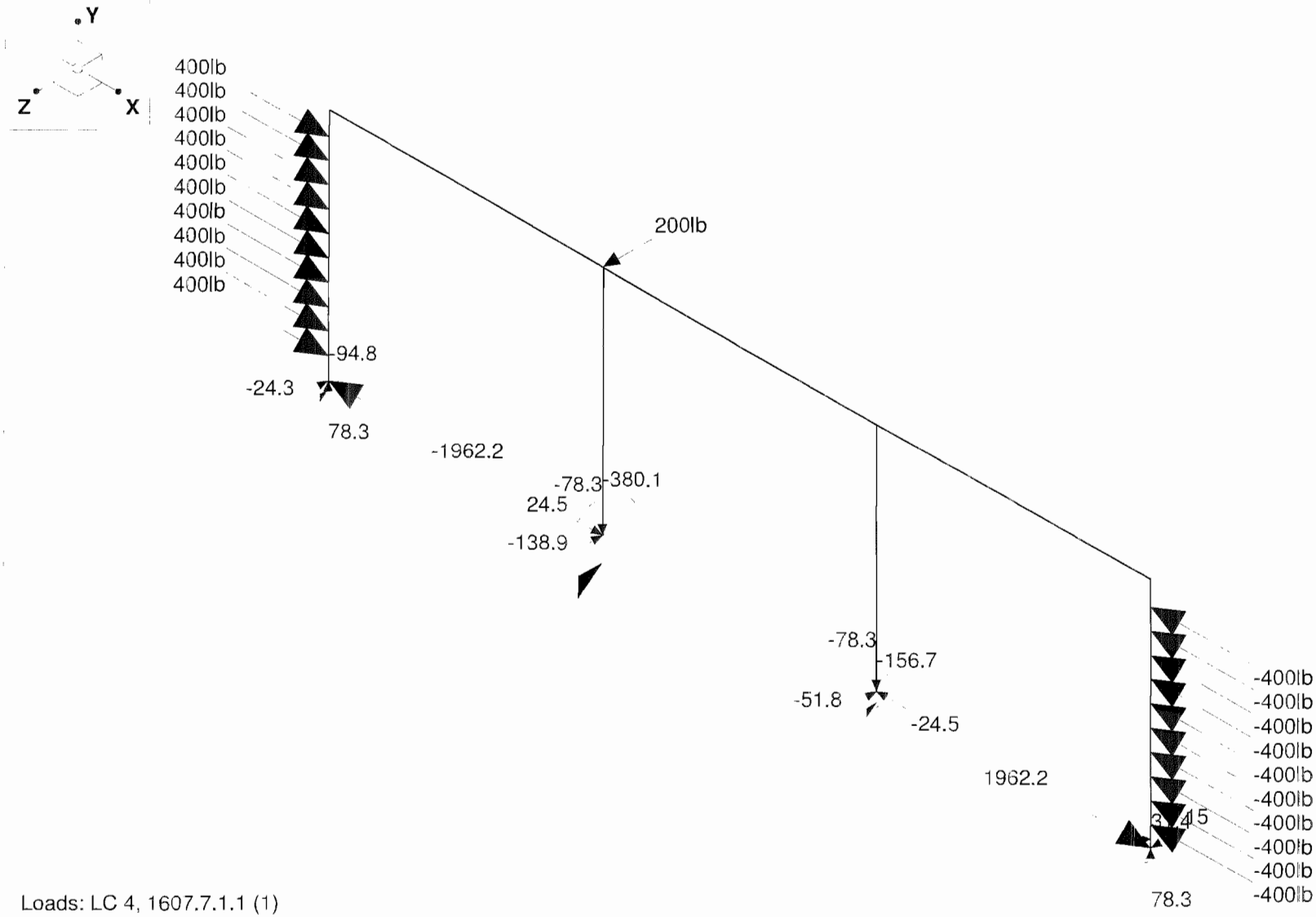
D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:24 AM

D6.R3D



Loads: LC 4, 1607.7.1.1 (1)
Results for LC 4, 1607.7.1.1 (1)
Reaction units are lb and lb-ft

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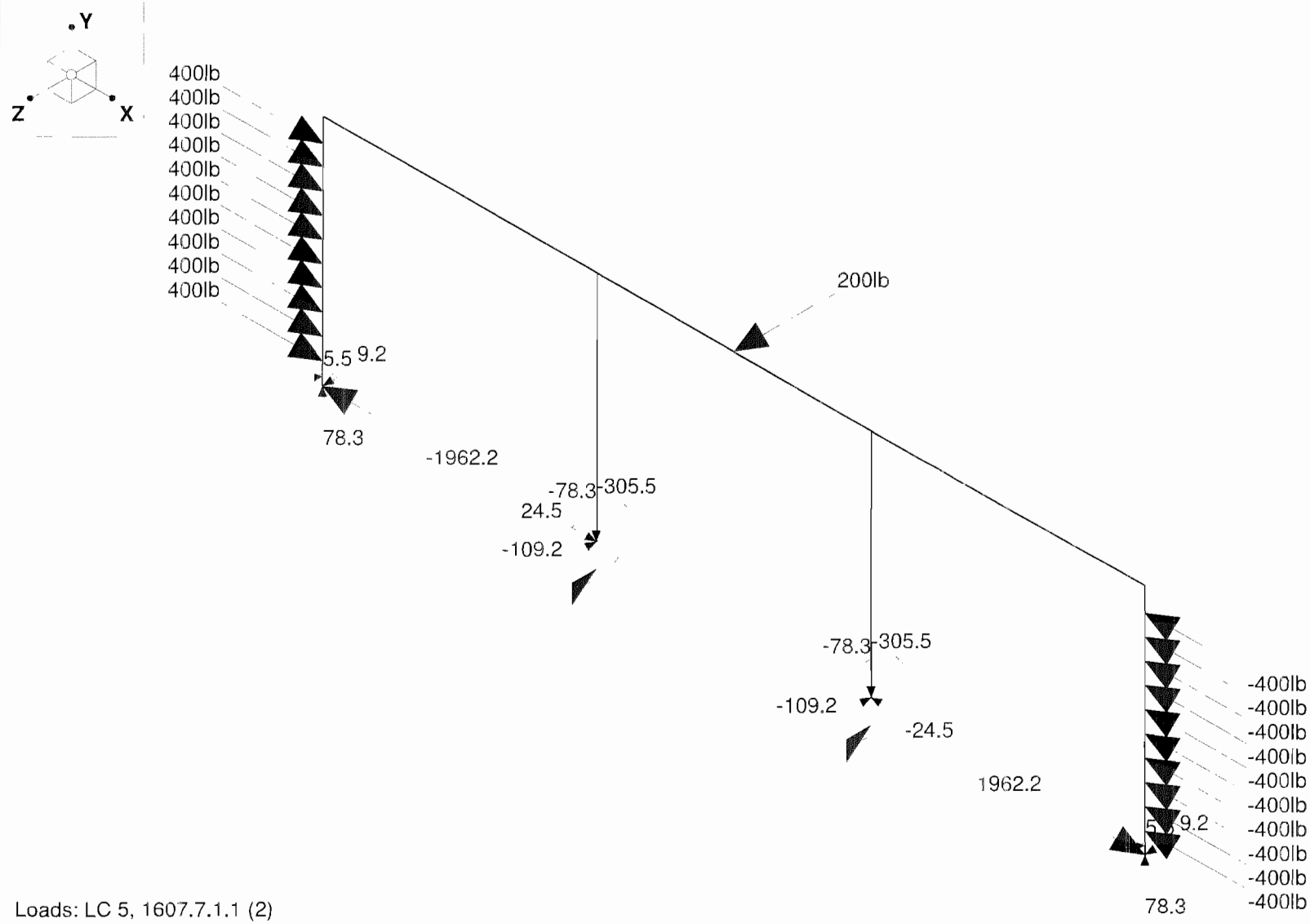
D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:25 AM

D6.R3D



Loads: LC 5, 1607.7.1.1 (2)
Results for LC 5, 1607.7.1.1 (2)
Reaction units are lb and lb-ft

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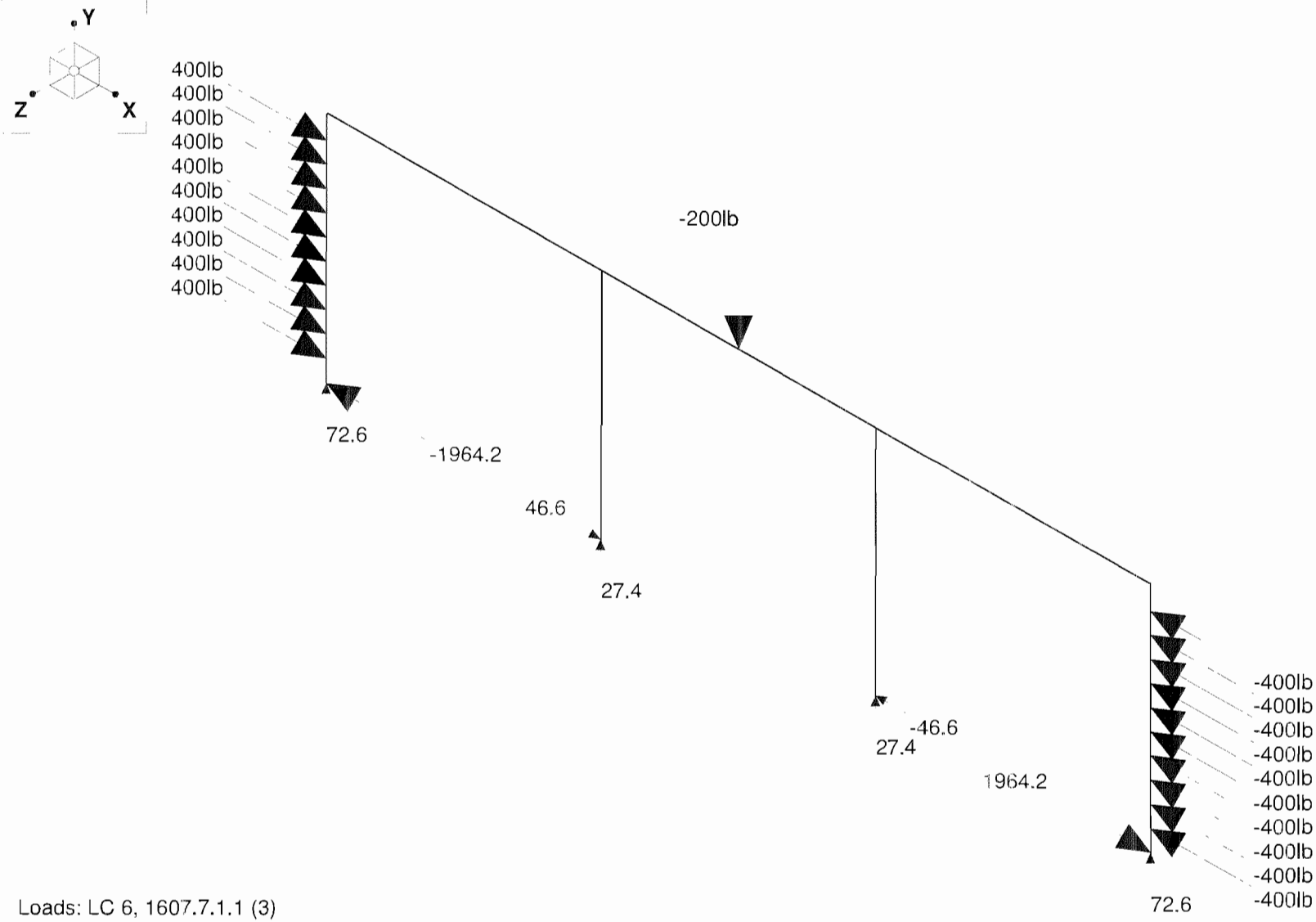
D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:25 AM

D6.R3D



Loads: LC 6, 1607.7.1.1 (3)
Results for LC 6, 1607.7.1.1 (3)
Reaction units are lb and lb-ft

Ferrari Shields & Associates

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D6 - 2" TUBE x 36.5" HIGH RAIL W/ 2"x1" TOP RAIL W/O BTM RAIL

Nov 4, 2008 at 11:25 AM

D6.R3D

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC : ASD 13th
Cold Formed Steel Code	AISI 01: ASD
Wood Code	NDS 2005: ASD
Wood Temperature	< 100F
Concrete Code	ACI 2005

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]
1	A500Gr42	29000	11154	.3	.65	.49	42
2	SS316	28000	11154	.3	.65	.49	30

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	RAIL	HSS2X1X2	Beam	Tube	A500Gr42	Typical	.609	.092	.28	.238
2	POST	HSS2X2X4	Column	Tube	A500Gr42	Typical	1.505	.744	.744	1.31
3	IPOST	HSS2X2X2	Column	Tube	A500Gr42	Typical	.841	.487	.487	.797

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Mem...	Surface (Pl...
1	Cable Prestress	None				20				
2	1607.7.1.2	None				16				
3	1607.7.1	None						3		
4	1607.7.1.1 (1)	None				1				
5	1607.7.1.1 (2)	None					1			
6	1607.7.1.1 (3)	None					1			

Load Combinations

	Description	Solve	PDelta	SR...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Cable Prestress	Yes	C		1	1												

Load Combinations (Continued)

	Description	Solve	PDelta	SR...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
2	1607.7.1.2	Yes	C		1	1	2	1										
3	1607.7.1	Yes	C		1	1	3	1										
4	1607.7.1.1 (1)	Yes	C		1	1	4	1										
5	1607.7.1.1 (2)	Yes	C		1	1	5	1										
6	1607.7.1.1 (3)	Yes	C		1	1	6	1										

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2		90	POST	Column	Tube	A500Gr42	Typical
2	M2	N3	N4		90	IPOST	Column	Tube	A500Gr42	Typical
3	M3	N2	N4		90	RAIL	Beam	Tube	A500Gr42	Typical
4	M4	N4	N8		90	RAIL	Beam	Tube	A500Gr42	Typical
5	M5	N5	N6		90	POST	Column	Tube	A500Gr42	Typical
6	M6	N7	N8		90	IPOST	Column	Tube	A500Gr42	Typical
7	M7	N8	N6		90	RAIL	Beam	Tube	A500Gr42	Typical

Envelope Joint Reactions

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
1	N1	max	-1962.156	5	84.642	2	9.18	5	5.503	5	0	1	0	1
2		min	-2082.188	2	72.574	6	-76.846	3	-257.072	3	0	1	0	1
3	N3	max	46.604	6	27.425	6	0	1	0	1	0	1	0	1
4		min	24.459	1	-84.642	2	-185.654	3	-531.12	3	0	1	0	1
5	N5	max	2082.188	2	84.642	2	14.998	4	31.363	4	0	1	0	1
6		min	1962.156	5	72.573	6	-76.846	3	-257.072	3	0	1	0	1
7	N7	max	-24.459	1	27.427	6	0	1	0	1	0	1	0	1
8		min	-46.605	6	-84.642	2	-185.654	3	-531.12	3	0	1	0	1
9	Totals:	max	0	6	200	6	0	1						
10		min	0	2	0	1	-525	3						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	lc	y Shear[lb]	lc	z Shear[lb]	lc	Torque[lb-ft]	lc	y-y Moment[l...	lc	z-z Moment[l...	lc
1	M1	1	max	84.642	2	9.18	5	-1963.493	1	0	1	0	1	5.503	5
2			min	72.574	6	-76.876	3	-2083.751	2	0	1	0	1	-257.072	3
3		2	max	84.642	2	9.181	5	-1163.157	1	0	1	-1195.528	1	0	1
4			min	72.574	6	-76.977	3	-1283.364	2	0	1	-1285.708	2	-199.379	3
5		3	max	84.642	2	9.178	5	41.377	2	0	1	-1559.491	1	0	1
6			min	72.574	6	-77.095	3	35.764	6	0	1	-1704.067	2	-141.593	3
7		4	max	84.642	2	9.17	5	1366.095	2	0	1	-1091.725	1	0	1
8			min	72.574	6	-77.171	3	1236.647	6	0	1	-1171.706	2	-83.741	3
9		5	max	84.642	2	9.162	5	2166.439	2	0	1	207.414	2	.138	2
10			min	72.574	6	-77.198	3	2036.927	6	0	1	185.727	6	-25.849	3
11	M2	1	max	27.425	6	0	1	46.628	6	0	1	0	1	0	1
12			min	-84.642	2	-185.654	3	24.459	1	0	1	0	1	-531.12	3
13		2	max	27.425	6	0	1	46.628	6	0	1	34.972	6	0	1
14			min	-84.642	2	-185.654	3	24.459	1	0	1	18.344	1	-391.878	3
15		3	max	27.425	6	0	1	46.61	6	0	1	69.938	6	.181	2
16			min	-84.642	2	-185.654	3	24.459	1	0	1	36.689	1	-252.635	3
17		4	max	27.425	6	2.066	2	46.569	6	0	1	104.878	6	2.026	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	lc	y Shear[lb]	lc	z Shear[lb]	lc	Torque[lb-ft]	lc	y-y Moment[l...	lc	z-z Moment[l...	lc
18			min	-84.642	2	-185.654	3	24.459	1	0	1	55.033	1	-113.393	3
19		5	max	27.425	6	2.066	2	46.569	6	0	1	139.805	6	36.579	4
20			min	-84.642	2	-185.654	3	24.459	1	0	1	73.377	1	0	1
21	M3	1	max	2165.012	2	.814	5	-72.572	6	.138	2	207.414	2	0	1
22			min	2035.793	6	-86.665	3	-84.622	2	-25.849	3	185.727	6	0	1
23		2	max	2165.012	2	.814	5	-72.572	6	.138	2	133.369	2	56.691	3
24			min	2035.793	6	-42.915	3	-84.622	2	-25.849	3	122.227	6	-.712	5
25		3	max	2165.012	2	.835	3	-72.572	6	.138	2	59.325	2	75.101	3
26			min	2035.793	6	-32.726	4	-84.622	2	-25.849	3	54.887	1	-1.425	5
27		4	max	2165.012	2	44.585	3	-72.572	6	.138	2	-4.775	6	85.906	4
28			min	2035.793	6	-32.726	4	-84.622	2	-25.849	3	-14.719	2	-2.137	5
29		5	max	2165.012	2	88.335	3	-72.572	6	.138	2	-68.276	6	114.541	4
30			min	2035.793	6	-32.726	4	-84.622	2	-25.849	3	-88.763	2	-2.923	3
31	M4	1	max	2191.461	2	42.748	4	0	1	14.987	4	71.529	6	114.541	4
32			min	2062.302	1	-100	5	-99.999	6	0	1	-9.416	2	-2.923	3
33		2	max	2191.461	2	42.748	4	0	1	14.987	4	-8.72	1	84.65	5
34			min	2062.302	1	-100	5	-99.999	6	0	1	-15.97	6	0	1
35		3	max	2191.461	2	100	5	100.001	6	14.987	4	-8.72	1	172.15	5
36			min	2062.302	1	0	1	0	1	0	1	-103.469	6	0	1
37		4	max	2191.461	2	100	5	100.001	6	14.987	4	-8.72	1	84.65	5
38			min	2062.302	1	0	1	0	1	0	1	-15.969	6	-.726	2
39		5	max	2191.461	2	100	5	100.001	6	14.987	4	71.532	6	0	1
40			min	2062.302	1	0	1	0	1	0	1	-9.416	2	-35.078	4
41	M5	1	max	84.642	2	15.001	4	2083.751	2	0	1	0	1	31.363	4
42			min	72.573	6	-76.876	3	1963.493	1	0	1	0	1	-257.072	3
43		2	max	84.642	2	15.012	4	1283.364	2	0	1	1285.708	2	20.108	4
44			min	72.573	6	-76.977	3	1163.157	1	0	1	1195.528	1	-199.379	3
45		3	max	84.642	2	15.023	4	-35.763	6	0	1	1704.067	2	8.844	4
46			min	72.573	6	-77.095	3	-41.377	2	0	1	1559.491	1	-141.593	3
47		4	max	84.642	2	15.025	4	-1236.646	6	0	1	1171.706	2	.054	2
48			min	72.573	6	-77.171	3	-1366.095	2	0	1	1091.725	1	-83.741	3
49		5	max	84.642	2	15.021	4	-2036.926	6	0	1	-185.724	6	0	1
50			min	72.573	6	-77.198	3	-2166.439	2	0	1	-207.414	2	-25.849	3
51	M6	1	max	27.427	6	0	1	-24.459	1	0	1	0	1	0	1
52			min	-84.642	2	-185.654	3	-46.602	6	0	1	0	1	-531.12	3
53		2	max	27.427	6	0	1	-24.459	1	0	1	-18.344	1	0	1
54			min	-84.642	2	-185.654	3	-46.602	6	0	1	-34.952	6	-391.878	3
55		3	max	27.427	6	0	1	-24.459	1	0	1	-36.689	1	0	1
56			min	-84.642	2	-185.654	3	-46.602	6	0	1	-69.904	6	-252.635	3
57		4	max	27.427	6	0	1	-24.459	1	0	1	-55.033	1	0	1
58			min	-84.642	2	-185.654	3	-46.602	6	0	1	-104.856	6	-113.393	3
59		5	max	27.427	6	0	1	-24.459	1	0	1	-73.377	1	25.849	3
60			min	-84.642	2	-185.654	3	-46.602	6	0	1	-139.808	6	-1.295	4
61	M7	1	max	2165.012	2	0	1	84.622	2	25.849	3	-68.276	6	0	1
62			min	2035.792	6	-88.335	3	72.572	6	0	1	-88.763	2	-35.078	4
63		2	max	2165.012	2	0	1	84.622	2	25.849	3	-4.776	6	55.23	3
64			min	2035.792	6	-44.585	3	72.572	6	0	1	-14.719	2	-26.308	4
65		3	max	2165.012	2	0	1	84.622	2	25.849	3	59.325	2	75.101	3
66			min	2035.792	6	-10.022	4	72.572	6	0	1	54.887	1	-17.539	4
67		4	max	2165.012	2	42.915	3	84.622	2	25.849	3	133.369	2	56.691	3
68			min	2035.792	6	-10.022	4	72.572	6	0	1	122.224	6	-8.769	4
69		5	max	2165.012	2	86.665	3	84.622	2	25.849	3	207.414	2	0	1
70			min	2035.792	6	-10.022	4	72.572	6	0	1	185.724	6	0	1

Envelope AISC 13th ASD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	Ic	Shear ...	Loc[in]	Dir	Ic	Pnc/om [lb]	Pnt/om [lb]	Mnyy/om [lb-ft]	Mnzz/om ...	Cb	LRFD E...
1	M1	HSS2X2X4	.853	16.125	3	.237	32.625	z	2	32213.715	37839.435	2017.576	2017.576	1....	H1-1b
2	M2	HSS2X2X2	.435	0	3	.032	13.125	y	3	18435.907	21154.469	1227.129	1227.129	1....	H1-1b
3	M3	HSS2X1X2	.684	0	2	.116	0	z	3	7484.423	15307.164	467.512	768.177	1....	H1-1a
4	M4	HSS2X1X2	.491	21	5	.047	0	z	4	7484.423	15307.164	467.512	768.177	1....	H1-1a
5	M5	HSS2X2X4	.853	16.125	3	.237	32.625	z	2	32213.715	37839.435	2017.576	2017.576	1....	H1-1b
6	M6	HSS2X2X2	.435	0	3	.032	0	y	3	18435.907	21154.469	1227.129	1227.129	1....	H1-1b
7	M7	HSS2X1X2	.684	42	2	.116	0	z	3	7484.423	15307.164	467.512	768.177	1....	H1-1a

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation	Yes
Include Warping	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Vertical Axis	Y

Hot Rolled Steel Code	AISC : ASD 13th
Cold Formed Steel Code	AISI 01: ASD
Wood Code	NDS 2005: ASD
Wood Temperature	< 100F
Concrete Code	ACI 2005

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections	Yes
Bad Framing Warnings	No
Unused Force Warnings	Yes

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]
1	LDX2101	28000	11154	.3	.65	.49	60
2	SS316	28000	11154	.3	.65	.49	30

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	RAIL	TU2x1x2	Beam	Tube	SS316	Typical	.662	.102	.321	.238
2	EPOST	TU2X2X3	Column	Tube	LDX2101	Typical	1.27	.668	.668	1.15
3	IPOST	TU2x2x2	Column	Tube	SS316	Typical	.902	.534	.534	.797

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Mem...	Surface (Pl...
1	Cable Prestress	None				20				
2	1607.7.1.2	None				16				
3	1607.7.1	None						3		
4	1607.7.1.1 (1)	None				1				
5	1607.7.1.1 (2)	None					1			
6	1607.7.1.1 (3)	None					1			

Load Combinations

	Description	Solve	PDelta	SR...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Cable Prestress	Yes	C		1	1												

Load Combinations (Continued)

	Description	Solve	PDelta	SR...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
2	1607.7.1.2	Yes	C		1	1	2	1										
3	1607.7.1	Yes	C		1	1	3	1										
4	1607.7.1.1 (1)	Yes	C		1	1	4	1										
5	1607.7.1.1 (2)	Yes	C		1	1	5	1										
6	1607.7.1.1 (3)	Yes	C		1	1	6	1										

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2		90	EPOST	Column	Tube	LDX2101	Typical
2	M2	N3	N4		90	IPOST	Column	Tube	SS316	Typical
3	M3	N2	N4		90	RAIL	Beam	Tube	SS316	Typical
4	M4	N4	N8		90	RAIL	Beam	Tube	SS316	Typical
5	M5	N5	N6		90	EPOST	Column	Tube	LDX2101	Typical
6	M6	N7	N8		90	IPOST	Column	Tube	SS316	Typical
7	M7	N8	N6		90	RAIL	Beam	Tube	SS316	Typical

Envelope Joint Reactions

	Joint		X [lb]	lc	Y [lb]	lc	Z [lb]	lc	MX [lb-ft]	lc	MY [lb-ft]	lc	MZ [lb-ft]	lc
1	N1	max	-1949.122	5	101.899	2	8.188	5	3.974	5	0	1	0	1
2		min	-2068.101	2	88.57	6	-77.325	3	-254.976	3	0	1	0	1
3	N3	max	51.586	6	11.429	6	0	1	0	1	0	1	0	1
4		min	29.469	1	-101.899	2	-185.175	3	-533.468	3	0	1	0	1
5	N5	max	2068.101	2	101.899	2	14.735	4	31.155	4	0	1	0	1
6		min	1949.122	5	88.57	6	-77.325	3	-254.976	3	0	1	0	1
7	N7	max	-29.469	1	11.43	6	0	1	0	1	0	1	0	1
8		min	-51.586	6	-101.899	2	-185.175	3	-533.468	3	0	1	0	1
9	Totals:	max	0	2	200	6	0	1						
10		min	0	1	0	1	-525	3						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	lc	y Shear[lb]	lc	z Shear[lb]	lc	Torque[lb-ft]	lc	y-y Moment[l...	lc	z-z Moment[l...	lc
1	M1	1	max	101.899	2	8.188	5	-1950.952	1	0	1	0	1	3.974	5
2			min	88.57	6	-77.365	3	-2070.243	2	0	1	0	1	-254.976	3
3		2	max	101.899	2	8.189	5	-1150.488	1	0	1	-1186.083	1	0	1
4			min	88.57	6	-77.505	3	-1269.708	2	0	1	-1275.531	2	-196.902	3
5		3	max	101.899	2	8.184	5	55.464	2	0	1	-1540.396	1	0	1
6			min	88.57	6	-77.666	3	48.839	6	0	1	-1683.474	2	-138.701	3
7		4	max	101.899	2	8.173	5	1380.592	2	0	1	-1062.718	1	0	1
8			min	88.57	6	-77.768	3	1250.062	6	0	1	-1140.386	2	-80.41	3
9		5	max	101.899	2	8.162	5	2181.046	2	0	1	249.661	2	.313	2
10			min	88.57	6	-77.804	3	2050.436	6	0	1	224.942	6	-22.066	3
11	M2	1	max	11.429	6	0	1	51.597	6	0	1	0	1	0	1
12			min	-101.899	2	-185.175	3	29.469	1	0	1	0	1	-533.468	3
13		2	max	11.429	6	0	1	51.597	6	0	1	38.698	6	0	1
14			min	-101.899	2	-185.175	3	29.469	1	0	1	22.102	1	-394.585	3
15		3	max	11.429	6	0	1	51.588	6	0	1	77.394	6	0	1
16			min	-101.899	2	-185.175	3	29.469	1	0	1	44.204	1	-255.701	3
17		4	max	11.429	6	1.945	2	51.571	6	0	1	116.078	6	1.786	2

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	lc	y Shear[lb]	lc	z Shear[lb]	lc	Torque[lb-ft]	lc	y-y Moment[l...	lc	z-z Moment[l...	lc
18			min	-101.899	2	-185.175	3	29.469	1	0	1	66.305	1	-116.817	3
19		5	max	11.429	6	1.945	2	51.571	6	0	1	154.756	6	33.466	4
20			min	-101.899	2	-185.175	3	29.469	1	0	1	88.407	1	0	1
21	M3	1	max	2179.099	2	.297	5	-88.563	6	.313	2	249.661	2	0	1
22			min	2048.869	6	-85.79	3	-101.873	2	-22.066	3	224.942	6	0	1
23		2	max	2179.099	2	.297	5	-88.563	6	.313	2	160.523	2	55.925	3
24			min	2048.869	6	-42.04	3	-101.873	2	-22.066	3	147.449	6	-.26	5
25		3	max	2179.099	2	1.71	3	-88.563	6	.313	2	71.384	2	73.569	3
26			min	2048.869	6	-33.025	4	-101.873	2	-22.066	3	66.045	1	-.52	5
27		4	max	2179.099	2	45.46	3	-88.563	6	.313	2	-7.537	6	86.69	4
28			min	2048.869	6	-33.025	4	-101.873	2	-22.066	3	-17.755	2	-.78	5
29		5	max	2179.099	2	89.21	3	-88.563	6	.313	2	-85.03	6	115.586	4
30			min	2048.869	6	-33.025	4	-101.873	2	-22.066	3	-106.894	2	-5.987	3
31	M4	1	max	2210.962	2	42.924	4	0	1	14.219	4	69.727	6	115.586	4
32			min	2080.346	1	-100	5	-100	6	0	1	-11.303	2	-5.987	3
33		2	max	2210.962	2	42.924	4	0	1	14.219	4	-10.466	1	86.46	5
34			min	2080.346	1	-100	5	-100	6	0	1	-17.773	6	0	1
35		3	max	2210.962	2	100	5	100	6	14.219	4	-10.466	1	173.96	5
36			min	2080.346	1	0	1	0	1	0	1	-105.273	6	0	1
37		4	max	2210.962	2	100	5	100	6	14.219	4	-10.466	1	86.46	5
38			min	2080.346	1	0	1	0	1	0	1	-17.772	6	-.896	2
39		5	max	2210.962	2	100	5	100	6	14.219	4	69.728	6	0	1
40			min	2080.346	1	0	1	0	1	0	1	-11.303	2	-34.646	4
41	M5	1	max	101.899	2	14.74	4	2070.243	2	0	1	0	1	31.155	4
42			min	88.57	6	-77.365	3	1950.952	1	0	1	0	1	-254.976	3
43		2	max	101.899	2	14.756	4	1269.708	2	0	1	1275.531	2	20.094	4
44			min	88.57	6	-77.505	3	1150.488	1	0	1	1186.083	1	-196.902	3
45		3	max	101.899	2	14.77	4	-48.839	6	0	1	1683.474	2	9.02	4
46			min	88.57	6	-77.666	3	-55.464	2	0	1	1540.396	1	-138.701	3
47		4	max	101.899	2	14.773	4	-1250.061	6	0	1	1140.386	2	.09	2
48			min	88.57	6	-77.768	3	-1380.592	2	0	1	1062.718	1	-80.41	3
49		5	max	101.899	2	14.769	4	-2050.436	6	0	1	-224.941	6	0	1
50			min	88.57	6	-77.804	3	-2181.046	2	0	1	-249.661	2	-22.066	3
51	M6	1	max	11.43	6	0	1	-29.469	1	0	1	0	1	0	1
52			min	-101.899	2	-185.175	3	-51.585	6	0	1	0	1	-533.468	3
53		2	max	11.43	6	0	1	-29.469	1	0	1	-22.102	1	0	1
54			min	-101.899	2	-185.175	3	-51.585	6	0	1	-38.689	6	-394.585	3
55		3	max	11.43	6	0	1	-29.469	1	0	1	-44.204	1	0	1
56			min	-101.899	2	-185.175	3	-51.585	6	0	1	-77.379	6	-255.701	3
57		4	max	11.43	6	0	1	-29.469	1	0	1	-66.305	1	0	1
58			min	-101.899	2	-185.175	3	-51.585	6	0	1	-116.068	6	-116.817	3
59		5	max	11.43	6	0	1	-29.469	1	0	1	-88.407	1	22.066	3
60			min	-101.899	2	-185.175	3	-51.585	6	0	1	-154.758	6	-1.082	4
61	M7	1	max	2179.099	2	0	1	101.873	2	22.066	3	-85.03	6	0	1
62			min	2048.868	6	-89.21	3	88.563	6	0	1	-106.894	2	-34.646	4
63		2	max	2179.099	2	0	1	101.873	2	22.066	3	-7.537	6	52.932	3
64			min	2048.868	6	-45.46	3	88.563	6	0	1	-17.755	2	-25.985	4
65		3	max	2179.099	2	0	1	101.873	2	22.066	3	71.384	2	73.569	3
66			min	2048.868	6	-9.899	4	88.563	6	0	1	66.045	1	-17.323	4
67		4	max	2179.099	2	42.04	3	101.873	2	22.066	3	160.523	2	55.925	3
68			min	2048.868	6	-9.899	4	88.563	6	0	1	147.448	6	-8.662	4
69		5	max	2179.099	2	85.79	3	101.873	2	22.066	3	249.661	2	0	1
70			min	2048.868	6	-9.899	4	88.563	6	0	1	224.941	6	0	1

Envelope AISC 13th ASD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	lc	Shear ...	Loc[in]	Dir	lc	Pnc/om [lb]	Pnt/om [lb]	Mnyy/om [lb-ft]	Mnzz/om ...	Cb	LRFD E...
1	M1	TU2X2X3	.677	16.125	3	.188	32.625	z	2	36474.801	45628.743	2514.97	2514.97	1....	H1-1b
2	M2	TU2x2x2	.562	0	3	.044	22.875	y	3	14674.53	16210.778	953.677	953.677	1....	H1-1b
3	M3	TU2x1x2	.911	0	2	.154	0	z	3	7068.776	11892.216	368.263	615.269	1....	H1-1a
4	M4	TU2x1x2	.571	21	5	.062	0	z	4	7068.776	11892.216	368.263	615.269	1....	H1-1a
5	M5	TU2X2X3	.677	16.125	3	.188	32.625	z	2	36474.801	45628.743	2514.97	2514.97	1....	H1-1b
6	M6	TU2x2x2	.562	0	3	.044	0	y	3	14674.53	16210.778	953.677	953.677	1....	H1-1b
7	M7	TU2x1x2	.911	42	2	.154	0	z	3	7068.776	11892.216	368.263	615.269	1....	H1-1a

***** End of Calculations *****